The Manufacturing Confectioner

Published by THE MANUFACTURING CONFECTIONER PUBLISHING CO., 30 N. La Salle St., Chicago, Ill.

Vol. III DECEMBER, 1923 No. 12

An Appreciation

WE extend to our readers this month a most Cordial Greeting of the Season with sincere good wishes for the New Year.

We feel that our relationship has been established on the right basis, that is, a working partnership with the manufacturers of confectionery rather than a buyer-seller contact only. This loyal and interested co-operation is producing constructive service to the confectionery industry and it is a pleasure and an inspiration to serve the interests of a field so responsive and an industry with such wonderful potentials.

Read wherever good candy is made

DELFT

The World's Best Food Gelatine

HAROLD A. SINCLAIR, 160 Broadway, NEW YORK

"Price is a relative term — Quality always a concrete fact"

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H. A. JOHNSON CO.
221 State St., Boston, Mass.

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Emerson Tower, Baltimore, Md.

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32 So. Charles St., Baltimore, Md.
1918 Market St., Philadelphia, Pa.
1139 Penn Ave., Pittsburgh, Pa.

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FRANK Z. WOODS, Manager, 180 N. Market St.

BLANKE MFG. & SUPPLY CO.
214 Washington St., St. Louis, Mo.

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304 Pioneer Bldg., St. Paul, Minn.

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CALIFORNIA FOOD PRODUCTS COMPANY
949 E. Second St., Los Angeles, Cal.

W. P. DOWNEY
33 Grey Nun St., Montreal, Can.

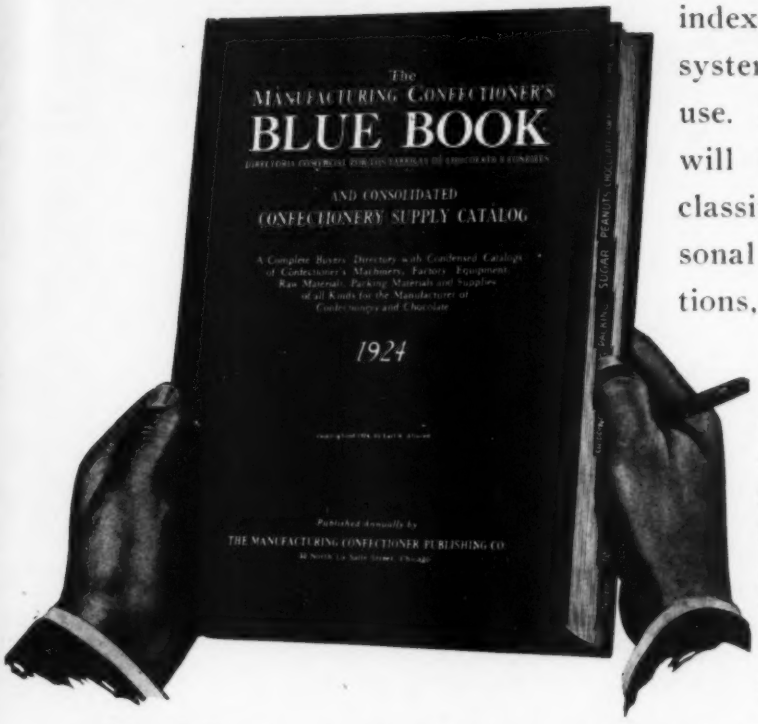
STOCKS EVERYWHERE

Christmas Greetings

Business for the year 1923 has been so good that I want to thank our friends and customers for their hearty cooperation and to wish them a Merry Christmas and a Happy and Prosperous New Year.

Harold A. Sinclair

A Complete Buyer's Information File



indexed and cross-indexed and systematized for every day desk use. Blank memorandum pages will be inserted opposite main classifications for the buyer's personal notations, prices, specifications, etc.

Every individual tool, utensil, machine and piece of equipment — every item of raw material and packing material and supplies for the manufacturer of confectionery will be listed with a reasonably complete list of their respective sources of supply.

The following confectionery supply firms have reserved space for their catalog data:

In addition to the advertisers in this issue, give the following firms your preferred consideration in your purchases for 1924:

Mathews Gravity Carrier Co.
Precision Thermometer & Instrument Co.
Emil Pick
Cary Maple Sugar Co.
National Equipment Co.
Powers Regulator Co.
Nulomoline Co.
American Maize Products Co.
Sethness Company
W. L. Fleisher & Co.
Candy and Chocolate Equipment Co.
Gin-Wol Co.
Lester P. Winchenbaugh
Carter Rice Paper Co.
Ideal Cocoa & Chocolate Co.
Hampden Glazed Paper & Card
Traver Paper Co.
General Box Co.
Manz Engraving Co.
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National Woodenware Co.
Ideal Stencil Machine Co.
Fortune Products Co.
Perfection Sample Case Co.
H. Gamse & Bro.
Foote & Jenks
Acme Box Co.
The W. K. Jahn Co.
H. Schultz Co.
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Central Waxed Paper Co.
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Fiber-Glass Food Cover Co.
E. T. Stille & Co.
Illinois Paper Box Co.
Merrell-Soule Co.
Edgerton Manufacturing Co.
E. H. Stroud Co.
United States Foil Co.

Entered as Second-Class Matter October 24, 1922, at the Postoffice at Chicago, Illinois, under the Act of March 3, 1879

UNCO SIMILE PEACH

THE potentials of peach flavor in confections have been somewhat neglected on account of the difficulty of embodying in the finished product the luscious flavor of the ripe fruit.

This problem has been solved by the creation of

UNCO SIMILE PEACH

a quasi-natural peach flavor, especially adapted for candy.

It has the delicacy of real peach but is so powerful that only a little is required and it must be used with discretion.

The determining factor is the taste of the finished confection. Unco Simile Peach gives the results.

"Our Quality Is Always Higher Than Our Price"

UNGERER & CO.

124 West 19th St. **New York**

Paris, France: 11 Rue Vezelay

Members: National Confectioners' Association, Midland Club, Chicago Association of Commerce.

The MANUFACTURING CONFECTIONER

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DR. FREDERIC W. MURPHY, Consulting Chemist.

DR. M. A. POSEN
ROBT. SCHWARZ
Schwarz Laboratories

FRED. W. AMEND, Secy., Chicago Association Confectionery Superintendents.

Vol. III DECEMBER, 1923 No. 12

Contents of This Issue

PURCHASING DEPT.—

Tare—Its Evolution and Application to Confectioners' Raw Materials
A. Adams Lund..... 18

MANAGEMENT AND PRODUCTION—

Material, Handling Methods and Equipment and Their Relation to the Lowering of Costs and Increasing of Quantity and Quality of Output—
Ralph G. Wells..... 28

Assimilating the Factory Foreman—J. R. Novins .....

SALES PROMOTION—

Helping the Retailer Sell Confectionery—J. George Frederick..... 24

Little Journeys Through Big Confectionery Plants—
James Stedman—Henderson Sweets, "Sweetacres"—Australia..... 36

Essential Oils, Fruit Flavor Bases, Cumarin and Vanillin

Oils of Spearmint and Peppermint, Absolutely Pure and of Finest Flavor

Oil Limes, Lemon and Sweet Orange, F. B., Handpressed

All Spice Oils Used in Confectionery
OF UNEXCELLED QUALITY

Hard Candy Flavors

APPLE	CURRANT, Red	PINEAPPLE
BANANA	GOOSEBERRY	RASPBERRY
BLACKBERRY	GRAPE	ROSE
CHERRY (with Pit Flavor)	HONEY	STRAWBERRY
CHERRY (without Pit Flavor)	LOGANBERRY	STRAWBERRY, Preserved
CHERRY, Wild	PEACH	VIOLET
CURRANT, Black	PEAR	

THE reception accorded to this new group which we placed on the market only a short time ago, has been gratifying and supports all we claim for them. These flavors are of the highest concentration, have the delicious aroma of the fruit itself and have been manufactured with a special view to permanence, and TO WITHSTAND CONSIDERABLE HEAT. In addition to the large amount of natural extractive matter from the fruits present, the Flavors contain sufficient Esters to provide the necessary strength and impart the special characteristics necessary and claimed for this group. Recommended for

FRUIT TABLETS, LOLLY POPS, STICKS, PAN WORK, CHEWING GUMS, AND WHEREVER THE FLAVOR MUST BE INTRODUCED AT HIGH TEMPERATURES.

TRUE FRUIT AROMA ESSENCES
Extra Concentrated

For fifteen years these pioneer flavors, extracted directly from the fresh ripe fruits, with no added flavor or color, have had preference with those manufacturers to whom *quality* is more important than *cost*. The flavor of perfection for Cream Centers de luxe.

FRITZBRO-AROMES

Are the *ideal flavors of highest concentration*, based on true fruit extractions and slightly fortified with natural esters for strengthening and to accentuate special characteristics of the fruit. A strictly *true fruit flavor effect* in a concentration much greater than can be produced in a natural true fruit essence.

FRITZBRO MAPLE BASE

A well nigh perfect reproduction of the universally liked product of the Northern Sugar Maple tree.

Two novel flavors for Fine Confectionery:

FRITZBRO SHERBET **ESSENCE OF ROMAN PUNCH**
afford delicious, tasteful additions to any line

With these various groups any problem of flavoring Candies of whatever nature can be promptly and successfully solved. Samples and details will be cheerfully furnished upon application.

Fritzsche Brothers, Inc., 82-84 Beekman Street NEW YORK

Chicago Branch: 33-35 West Kinzie Street

Rich Standing Cream Caramels

Made with Senneff-Herr's X-L Cream Caramel Paste

FREE: The Candy Maker's Guide

A booklet giving many proven formulas for producing standard staple items in a way that makes them repeat at a profit.

For the manufacture of a standing cream caramel of superior quality as smooth and rich in flavor as one made from all pure sweet cream, we have developed our "X-L Cream Caramel Paste." It excels because it actually produces a more pleasing flavor than all-butter-fat candies while reducing the costs of the piece to minimum.

May we send you The Candy Maker's Guide, with formulas for producing these caramels with better eating and standing qualities? It's free.

OTHER SENNEFF-HERR PRODUCTS

EGG-O-CREME

"The Best for Cream Centers."

Makes a soft, snowy-white velvety and creamy starch mould center that ripens ready for the market in a very few days. Also a center that is easy to dip with a small percentage of coating because of a smooth, firm crust and the absence of starch.

NOUGAT WHIP

is monarch of them all in quality, lightness, smoothness and flavor. Our NOUGAT WHIP is made from pure Hen Egg Albumen. IT IS ABSOLUTELY FREE FROM SUBSTITUTES.

NOUGAT WHIP belongs to Senneff's "Big 3" family.

SENNEFF-HERR COMPANY, Sterling, Ill.

You may send a copy of your **Candy Maker's Guide**—without obligation.

Name .....

Per .....

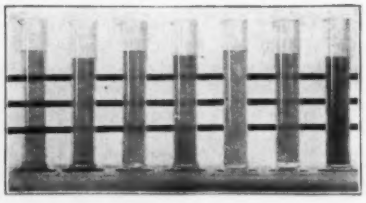
Address .....

How About Your Gelatine?

That is one thing you want to be sure about. Unseen, untasted it is all important. It has to be good. Always! You have to depend on it.

Use Atlantic super-clarified gelatine!

Raw materials used in its manufacture are carefully selected—finer than is ordinarily used in gelatines. The process of making calls for the utmost care in transforming these raw materials into gelatine. The result is a uniformly high grade gelatine of unparalleled purity, viscosity and clearness—a brand upon which you can depend.



The test tube at the left contains Atlantic Super-Clarified Gelatine. Note its clarity —its high viscosity.

"Purest and Best— It Stands the Test"

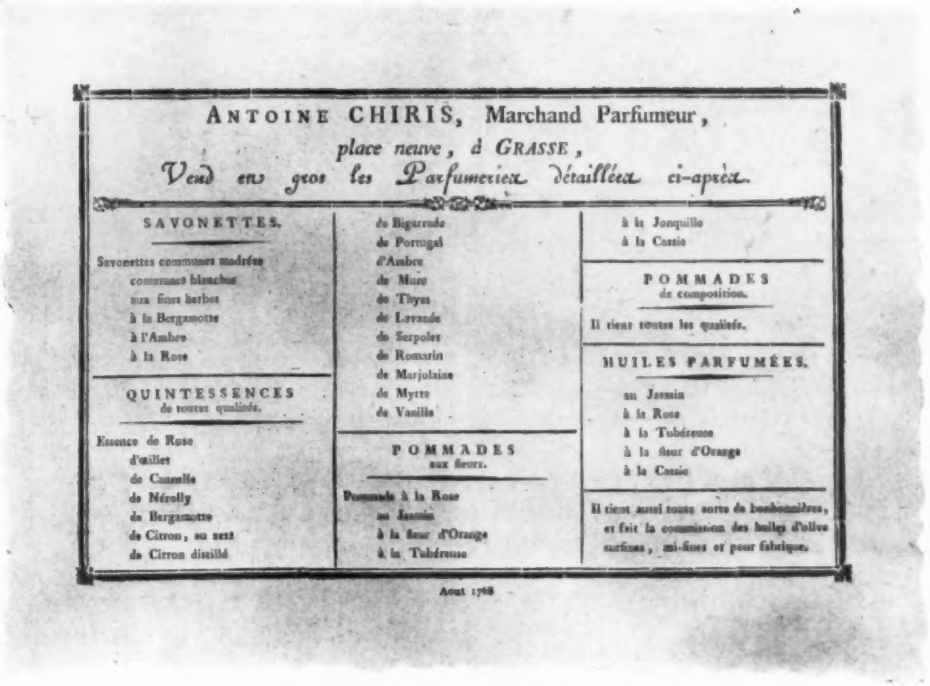
A Free Test

Make the test of trying out our gelatine by ordering a barrel from the nearest office. Use five or fifteen pounds and if it doesn't match up with our claims for it, send the unused portion back. We will pay the freight both ways.

Atlantic Gelatine Company
WOBURN, MASSACHUSETTS
Branches:
Chicago: Suite 510, 118 N. LaSalle Street
New York City: Room 1081 Woolworth Building

ATLANTIC *Super-Clarified* GELATINE

Established 1768



ANTOINE CHIRIS, Marchand Parfumeur,
place neuve, à GRASSE,
Vend en gros les Parfumeries détaillées ci-après.

SAVONETTES.
Savonettes communes modrées
communes blanches
aux fines herbes
à la Bergamotte
à l'Ambre
à la Rose

QUINTESSENCES de toutes qualités.
Essence de Rose
d'œillet
de Cannelle
de Nérolly
de Bergamotte
de Citron, au zest
de Citron distillé
de Bigarrade
de Portugal
d'Ambre
de Mare
de Thym
de Lavande
de Serpolet
de Romarin
de Marjolaine
de Myrte
de Vanille

POMMADES aux fleurs.
Pommade à la Rose
au Jasmin
à la fleur d'Orange
à la Tubéreuse
à la Jonquille
à la Cassie

POMMADES de composition.
Il tient toutes les qualités.

HUILES PARFUMÉES.
au Jasmin
à la Rose
à la Tubéreuse
à la fleur d'Orange
à la Cassie

Il tient aussi toute sorte de bonbonnières, et fait la commission des huiles d'olive surfines, mi-fines et pour fabrique.

Aout 1768

Exact reproduction of first "Price List" of Antoine Chiris
Dated August, 1768

"Our experience of over one hundred and fifty years of continuous manufacture in this line should enable us to serve you well."

Basic Fruit Flavors - - Essential Oils

Uniformity — Strength — Quality

GENUINE FRUIT EXTRACTS and **FRUIT PASTES**
—especially adapted for flavoring cream centers.

IMITATION FRUIT FLAVORS—for flavoring hard goods where high temperature will not permit use of Genuine Fruit Extracts.

Send for samples and descriptive booklet of our Basic Flavor Products

ANTOINE CHIRIS COMPANY

153 Waverly Place, New York City, N. Y.

BRANCH OFFICES AND STOCKS

CHICAGO: 150 W. Austin Ave. **PHILADELPHIA: 327 Walnut St.**
SAN FRANCISCO: 216 Pine St. **ST. LOUIS: 511 S. 2nd St.**
MONTREAL: 489 St. Paul St., W.

It's the Good-will Season

the season when the air is full of the Christmas "Feel"—and the mails full of expressions of Good-Will.

So Nucoa Products

take this opportunity to express their appreciation of the Good-Will shown them for more than a quarter of a century.

Good-Will which can be earned only by Quality and Service is the greatest asset that Nucoa Products possess—an asset that will never be allowed to decrease in value.

And in thanking you for your Good-Will, Nucoa Products ask that you accept this as an expression of Christmas Good-Will and Good Wishes.

NUCOA PRODUCTS

NUCOA is the hard butter you use for those shiny chocolates, perfect caramels, taffies, nougats and chewing candies of all kinds, and for smooth satiny icings.

NUCOLINE, a soft butter, insures those salted nuts that don't turn rancid. Just right for popcorn goods and slab dressing. For shortening Pastries, Cakes, etc.

PLASTIC NUCOLINE is a filler by cold process for those delicate "spun gold" wafers with ice-creamy filling—famous the world over.

KANDEX solves your every caramel problem.

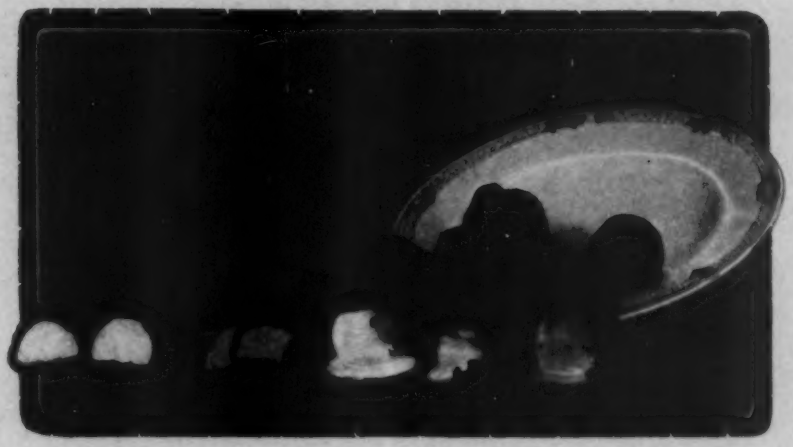
THE BEST FOODS, Inc.

CHICAGO
111 W. Washington St.

NEW YORK CITY
Nucoa Bldg.
4th Ave. at 23rd St.

SAN FRANCISCO
1964 Bryant St.

Nulomoline for Better Candy



CHOCOLATE COATED CREAMS

THE chief value of NULOMOLINE in chocolate coated creams is as a means of preventing bursting. Moreover, as a doctor NULOMOLINE is of unequalled value in all-sugar fondants for preventing graining and retaining moisture. If you use corn syrup, the addition of NULOMOLINE to the batch prevents drying out and adds to the sweetness of the goods.

P.S. Nulomoline makes candies that keep.

The Nulomoline Company

New York :: Chicago :: Boston

NULOMOLINE
THE HONEY OF SUGAR

CHOCOLATE COATED CREAMS

THE most baffling and most interesting trouble in connection with the making of cream centers is that peculiar form of fermentation which is generally referred to as "bursting." All cream centers are liable to dry out or grain. These troubles are important, and the making of fine goods is dependent upon the candy maker's ability to overcome them. But bursting is the major problem.

Our Service Department has a definite means of preventing bursting. Let us tell you how to make a smooth fondant—how to secure soft centers which will stay soft. Give us a word picture of your Cream Department—the kind of beaters, coolers, melters and depositors you use. We would also like to know the condition of the starch. Wet starch hinders the making of good centers.

The coupon is for your convenience.

All formulas and information sent without obligation

M-12 Service Dept. THE NULOMOLINE CO., 109-111 Wall Street, New York, N. Y.

Please send me your formulas for
(Check those desired)

Nougat	☐	Cast Creams	☐	*Name*_____
Caramels	☐	Hand Rolled Creams	☐	*Position*_____
Fudge	☐	Hard Candy	☐	*Firm*_____
Marshmallow	☐	Coconut Work	☐	*Street and No.*_____
Jellies	☐	Bon-Bons	☐	*City and State*_____

FRUIT FLAVORS

Essential Oils=Food Colors

OIL SWEET ORANGE CALIFORNIAN AND OIL LEMON CALIFORNIAN

Pressed from New Crop Fruit

CONFECTIONERS' FRUIT PASTES

Orange, Tangerine, Lemon, Etc.

Ideal for Cream Centers

CONCENTRATED FRUIT JUICES

Preserved with Sugar

Guaranteed absolutely pure. The delicious flavor and freshness of the original fruit unimpaired and fully retained.

Cherry, Currant, Pineapple, Strawberry, Etc.

Send for Price List

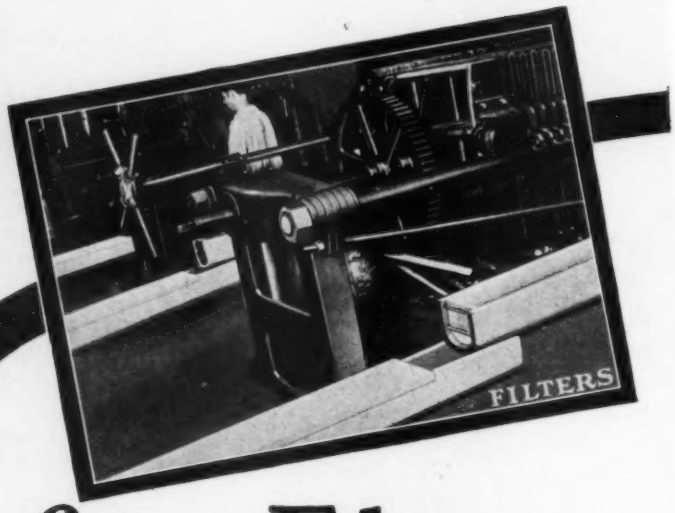
W. J. BUSH & CO.

INCORPORATED

370 Seventh Avenue **NEW YORK, N. Y.**

Chicago Office: 1018 S. Wabash Ave. Montreal Office: 394 St. Paul St. W.
Works: Linden, N. J. National City, Cal.

Only 5 minutes



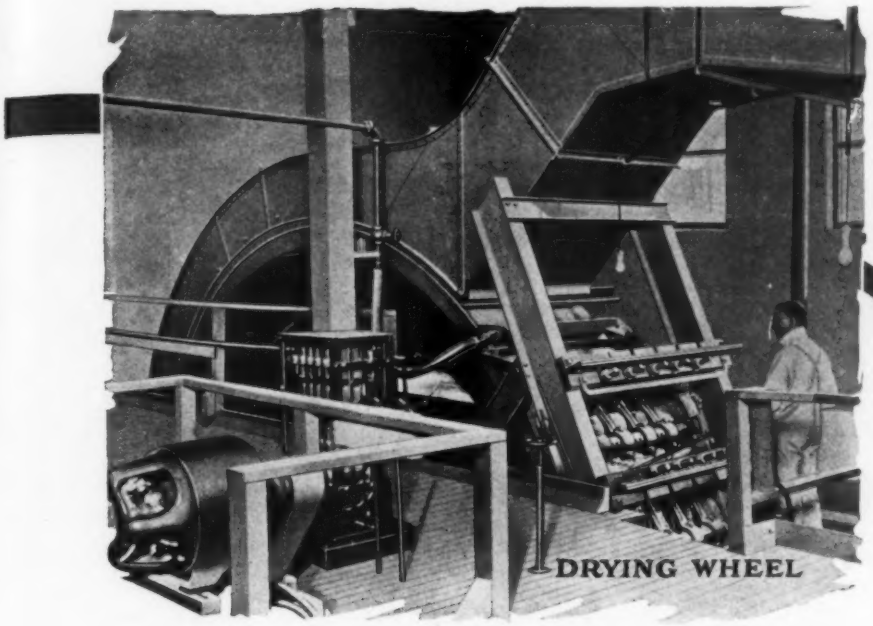
from Filters to Barrels

It's a radical departure—undoubtedly the greatest step forward in the history of Gelatine production. Just think of it—only 5 minutes to accomplish what formerly required from sixteen to forty-eight hours. And you know how important the element of time is in the production of any food product. Gelatine liquors, being exceptionally sensitive, rapidly deteriorate when held for any length of time at the temperature required for drying. Consequently, practically eliminating time in manufacture assures the user of Gelatine a product of unparalleled uniformity in purity.

This great contribution to the gelatine producing art is a result of years of untiring effort put forth by our scientists and engineers who are recognized as leading authorities throughout the industry. By one revolution of the big Drying Wheel pictured above, the liquid gelatine, directly from the filters, is transformed into flake gelatine and deposited into containers.

The same zeal that so closely guards sanitation in the produc-

Ucopco Wheel


DRYING WHEEL

tion of WHEEL DRIED Gelatine also extends to the selection of the raw materials from which it is made. You cannot imagine—much less produce—a better, purer, more wholesome gelatine than UCOPCO. And yet it costs no more than ordinary gelatine.

No user of gelatine—large or small—who is seriously endeavoring to make his product the best possible can afford to ignore UCOPCO—the super-gelatine. Orders can be placed with the nearest branch listed below. Stocks are carried at points convenient to you.

You can improve your product by the use of UCOPCO without additional cost.

United Chemical & Organic Products Company

Home Office
4200 South Marshfield Ave., Chicago

Branches
New York New Orleans Milwaukee
Detroit San Francisco

FROM WHEEL TO BARRELS

Dried Gelatine

One Easter Problem that's Solved!

A Merry Christmas business and a prosperous New Year

Next month when your Easter goods are being made, you will have enough problems to solve without worrying about your centers.

So remember that Fondax is again ready to serve you. For many years it has held its reputation as the most delicious, economical and reliable cream fondant for Easter goods of every description — large Easter Egg centers, Easter bulk and box candies, and marshmallow work.

Fondax saves time and labor—no need for a stock of eggs. Fondax is ready for instant use. It keeps down cost and assures success in every batch.

Fondax whitens and refines cream centers; lightens the weight though increasing the size; seals the "breaks" that sometimes occur in chocolate coatings, and prevents excessive moisture and shrinkage.

"Of course, we'll need Fondax—couldn't do without it"—said a prominent manufacturer the other day. His Easter sales are unsurpassed—he has always used Fondax. You can share his success. Send for a trial order and proven formula.

10 gal. crated cans	35 lbs.
½ bbls.	110 lbs.
Barrels	200 lbs.

(approx. wts.)

WHITE-STOKES CO., Inc.

CHICAGO—3615-23 Jasper Place **BROOKLYN—253 36th Street**

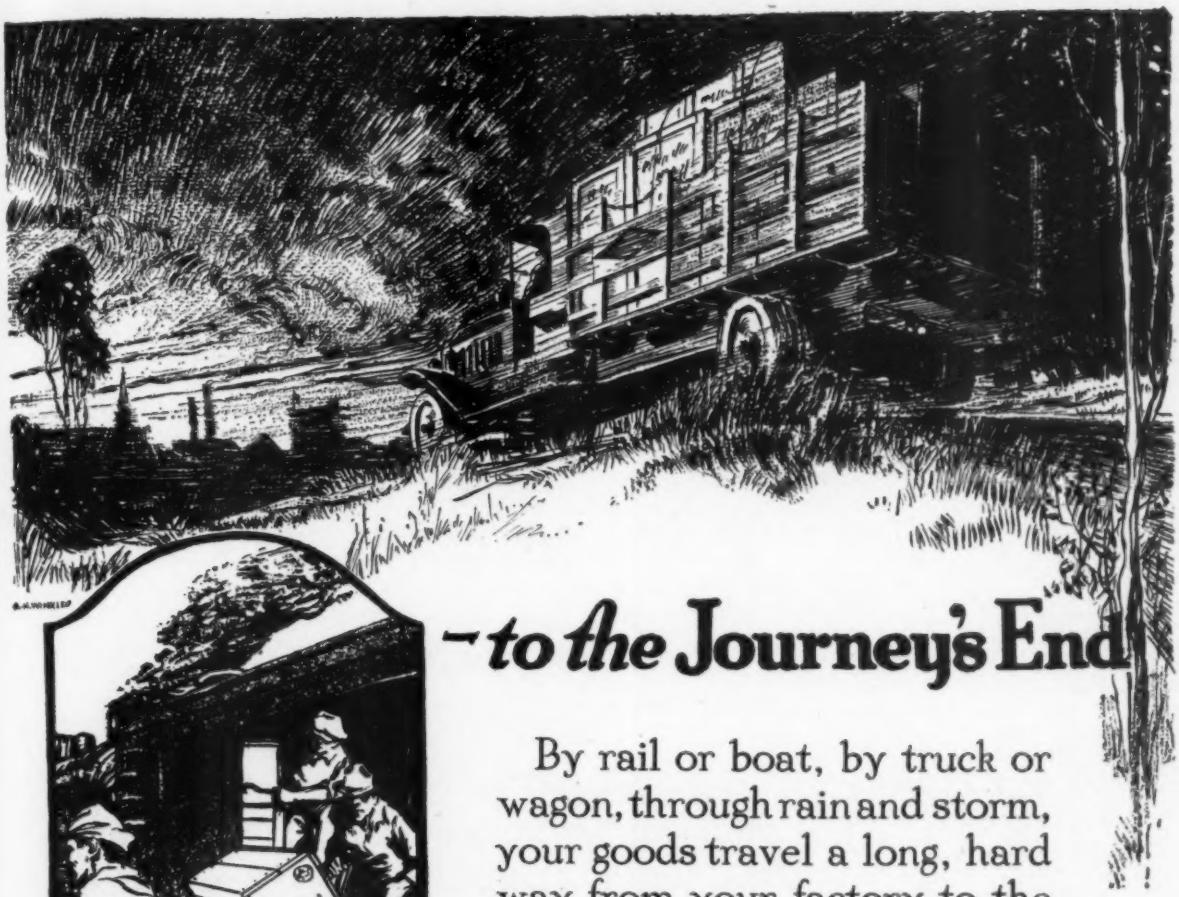
This label identifies the genuine Fondax

White Stokes
FONDAX

White Stokes

FONDAX

Trade Mark Registered—U. S. Patent Office



—to the Journey's End

By rail or boat, by truck or wagon, through rain and storm, your goods travel a long, hard way from your factory to the retail store.

No matter how often good wood boxes are loaded and unloaded, handled with hooks, piled under heavy freight, dropped from car to platform and from truck to the ground, they guard your goods from damage.

Good wood boxes can always be opened for inspection or repacking by jobber or wholesaler. It takes only hammer and nails to make them ready for duty again. They carry your product safely to the journey's end.

Good Packing Pays

Good Wood Boxes

Backed by the National Association of Box Manufacturers

GENERAL OFFICES:
844 RUSH ST., CHICAGO
NEW ENGLAND: 1013 SCOLLAY BLDG., BOSTON, MASS.

Uniformity—Strength —Purity

"Atlas Brand" Colors

(All Shades)

Certified Combination Colors
Certified Primary Colors
Certified Paste Colors
Vegetable Dry Colors
Vegetable Paste Colors
Atlas Carmine No. 40

"Atlas Brand" Flavors and Extracts

Genuine True Fruit Extracts
Imitation Fruit Flavors
Conc. Imitation Fruit Flavors
Pure Vanilla Extracts
Imitation Vanilla Flavors
Maple Flavors

The colors and extracts you use in the manufacture of your product can either add to its ultimate success or be the means of failure.

"A chain is no stronger than its every link."

A poor color or a cheap flavor can ruin the best confection.

"Atlas Brand" colors and extracts are uniform, strong and pure. They are the result of seventy-two years of perfection. Their perfection is recognized by many of the country's foremost Candy manufacturers and their use is employed in every part of the country.

A trial quantity of "Atlas Brand" colors or flavors will be gladly sent on request with the understanding that they must satisfy—otherwise returnable at our expense.

H. KOHNSTAMM & CO., Inc.

CHICAGO 11-13 E. Illinois St.

NEW YORK 83-93 Park Place

ESTABLISHED 1851

THE PUBLISHER'S PAGE

Looking Backward

This issue closes volume III of THE MANUFACTURING CONFECTIONER—three years of intensive application to the business of manufacturing confectionery and a service which our industry has a right to expect from the first and only publishing company devoted to the interests of this specialized field. In pioneering the idea and ideal of a publication along these lines we have necessarily come into close personal relationship with many firms and individuals who are vitally interested in the business of manufacturing candy—either directly or indirectly. These business friendships mean a great deal to us. This wonderful Christmas season gives us the occasion for expressing our appreciation to our many subscribers and advertisers who are working with us in the true co-operative spirit.

There is a certain brand of understanding between business men which is the motive power of industry; its converse, misunderstanding, is the chief cause of waste and keeps more b u s i n e s s men apart than any other one thing. For instance, two years ago this magazine had to run the gauntlet of a more or less popular protest about there being "too many confectionery publications"! (—as if there could be too many of something that never existed!) Today such a protest is a "bromide" as far as THE MANUFACTURING CONFECTIONER is concerned because the confectionery industry really *understands* our motive and the economic importance of this publication. We got together with the confectionery plant managers, the buyers and practical candy men in the spirit of working out a publishing unit and complete information service of practical value to them which has never been attempted heretofore. This close contact with the buying factors in this field has resulted this year in the development of special service features for the annual MANUFACTURING CONFECTIONER'S BLUE BOOK and also a policy and program for our semi-annual supplement, THE CONFECTIONERY FOREMAN, which, with this monthly publication, makes a complete unit of fifteen issues a year devoted to the business of manufacturing confectionery. 1924 will give these publications their first opportunity to function collectively and we approach the New Year with renewed inspiration and confidence in the immediate future of the candy industry.

New Management

Announcing—

JAMES WALKER ALLURED

—— 6½ pounds ——

Chief Inspiration and Charge d'affairs

Looking Forward

"There are three prime requisites for the success of any business," said E. H. Harriman. "The first is *men*. The second is *men* and the third requisite is *men*." We have a big work laid out for 1924 and it is a tribute to THE MANUFACTURING CONFECTIONER and its program of accomplishments that it has attracted a man, in the person of M. Bennett Kovnat who is recognized authority on industrial merchandising.

Mr. Kovnat is very well known to many of the leading manufacturing confectioners, especially in the central west. He has had an opportunity the past three years to observe the conditions and needs of this industry from an intimate contact with the confectionery trade. He is a man of vision, a keen analyst with a wide experience as a sales and advertising executive. For ten years previous to 1920, Mr. Kovnat operated a technical advertising agency and acted as counsel for technical publications. Gentlemen—meet Mr. Kovnat.

Every buyer in our industry, we hope, is following the series of articles by A. Adams Lund. This is the first time in the history of the confectionery industry that any attempt has been made to compile a record of definitions of terms and explanations of customs of the raw material trades and discuss the problems of purchasing confectioners supplies in a practical way. Whatever the average buyer discovers along these lines is usually by sad experience often after costly mistakes and misunderstandings. Our readers are invited to discuss their individual purchasing problems with Mr. Lund.

Here are a few subjects which are scheduled for 1924:

Handling Corn Syrup.
Cream Centers (Hand-Rolled and Cast).
Fondant in principle and practice.
Moulding Starch—Its use and care.
Dry Rooms.
Ice Boxes and Air Conditioning.

Beginning with the next issue, January 1924, Hard Boiled Jim, a stern and rock bound sugarhead, will appear in an illustrated series of comic characterizations.

Hard Boiled Jim is a typical character in every well regulated candy plant; you will like him.

Tare Weights

Their Origin and Application to Confectioners' Supplies

A Series of Articles on the Customs of the Raw Material Trades and Their Application to the Candy Industry.

By Albert Adams Lund

Mr. Lund is purchasing agent with one of the foremost manufacturing confectioners in America. This series will cover the various phases of the everyday interests and problems of the buyer of candy factory supplies. Comments and open discussions from other buyers are invited, as well as suggestions of topics which would be of special timely interest to any of our subscribers—Editor.

WHEN a truck backs up to the door with 300 boxes of almonds, over a ton of this is *tare*. This ton of unproductive material may have traveled three thousand miles from Spain, been loaded on a truck and perhaps put into storage for several months before it was loaded on the truck which finally delivered it to the factory. The expense of handling this dead lumber, destined to discard, will amount to from one to three per cent of the value of the almonds.

When we think of the mountains of material which are consumed in our factories in a month or a year's time, we realize that the tare unostentatiously stencilled on the packages which come rolling in to us, plays a very definite and important part in our business. Yet it is a subject about which all is ignorance, uncertainty and confusion.

Seven leading importers of dried fruits were asked to name the import tare on natural Smyrna figs. Here are their answers:

Importer No. 1—Actual.
Importer No. 2—Gross for net.
Importer No. 3—1 per cent.
Importer No. 4—2 per cent.
Importer No. 5—2 per cent.
Importer No. 6—1 lb. per bag.
Importer No. 7—3/16 lb. on 30-lb. bags; 1/8 lb. on 60-lb. bags.

Several of them hastened to qualify their answers by pointing out that the matter of tare was largely dependent upon the terms of the individual contract. They neglected to add that nine times out of ten this detail is entirely forgotten until after the deal has been closed!

All this goes to emphasize the overwhelming need of standardization to protect the buyer in the absence of specification.

Between the tare and the invoice weight there exists this important relationship: Not only is the latter dependent upon the amount of tare allowed, but unless the tare is definitely specified, *even the certified weight note may become valueless.*

No less significant is the effect of tare on price, where the constant failure to provide for it gives rise to erroneous costs. A common mistake is to compute the ultimate cost of a material by adding to its price, figured on a net instead of a gross weight basis, the various transportation and carrying charges incurred subsequent to purchase.

For example, on almonds in 28 lb. boxes, the majority of buyers and importers will figure:

	Lb.
Freight @ $.30 per 100 lbs.	$ .003
2 cartages (in and out of storage) @ $.20 per 100 lbs.	.004
Storage (2 months) @ $.15 per 100 lbs.	.003
Total of incidental charges	$ .01
Purchase price of almonds	.37
Final raw material cost	$ .38

You are familiar with this method, possibly have used it yourself; a simple system; nevertheless, highly inaccurate. What of the 7 lbs. of tare which must be "handled" along with the material? It is one-quarter as much as the net weight. On incidental charges aggregating 1c lb. on the net, these same charges will come to 1¼c lb. on the gross; 1½c lb. on the net will amount to almost 2c lb. on the gross; and so on. Who can afford to disregard a discrepancy of ¼ to ½c lb. in the cost of a raw material?

Relationship of Tare and Net Weights in Nut Meats

To enable the buyer to allow for his tare while employing the hasty method of cost-finding outlined above, the approximate relationship between the average tare and net weights of the seven most popular nutmeats has been expressed in terms of simple percentages in the following table:

Variety.	Net weight. (No. of lbs.)	Tare Weight. Average No. of lbs.	Tare Weight. Percentage of the net weight	Tare Weight. Averages common to several materials.
Almonds, boxes	25	6-7	26	
Almonds, boxes	28	7	25	
Almonds, cases	112	28	25	
Almonds, cases	220	55	25	
Walnuts, cases	55	15	27	25%
Pistachios, cases	110-112	28	25	
Pistachios, cases	125	30	24	
Cashews, cases	224	56	25	
Pignolias, Spanish, cases	110-112	28	25	
Pignolias, Italian, cases	165	25-30	15-18	
Pecans, cases	50	10	20	
Pecans, barrels	150	18-20	12-14	12%
Brazils, barrels	225	22-25	10-12	

The regularity of these percentages may arouse considerable curiosity and some skepticism. It appears to be quite accidental. Naturally, these percentages are subject to some variation, although the uniformity of cooperage specifications has done much to standardize the tares of otherwise unrelated items. But for the purpose of rough calculation, they will be found to be substantially accurate and extremely useful.

Actual Tares

Because of the difficulty and inconvenience of opening and unpacking the various materials to ascertain their true net weight (not to mention the attendant dangers of loss and spoilage), it has become customary for the packer to weigh each package separately before introducing the material into it. This weight, which is then marked on the outside of the package, is known as the actual, particular or real tare. By means

Material.	Variety.	Package.	Allowance.
Gum arabic	Sorts, etc.	220 lb. bags	4 lbs. per bag
Cocoas*	Bahia	130 lb. bags	1 lb. per bag
	La Guayra	130-150 lb. bags	Up to 145 lbs—2 lbs. per bag; Over 145 lbs.—2%
	Pto. Cabello	125-150 lb. bags	Up to 145 lbs—2 lbs. per bag; Over 145 lbs.—2%
	Maracaibo	100-110 lb. bags	Up to 100 lbs.—1 lb. per bag; Over 100 lbs.—1%
	Guayaquil (Arriba, Machala, and Caraquez)	150&175 lb. bags	2%
	Trinidad	195-200 lb. bags	
	Grenada	180 lb. bags	
	Para	150&190 lb. bags	
	Haiti	150 lb. bags	
	Sanchez	150 lb. bags	
	Jamaica	200 lb. bags	
	Surinam	220 lb. bags	
Dates		63 lb. boxes	8 lbs. per box
Figs	Smyrna		
	Pulled and layer		Deduct actual tare of skeleton (50-54 lbs.) and allow 12% of remainder for tare of small wood boxes.
	Naturals	30&60 lb. bags	Import—2%†; Local—G.F.N.
	Portuguese Tapnets	4/30 lb. tapnets per seron	Deduct 1 lb. tare for seron; Tapnets, G.F.N.
Sugar	Cane		
	Export, refined	100 lb. bags	12 oz. per bag
	Export, raw	320 lb. bags	2½ lbs. per bag
	Maple		
	Vermont	Tin pails	5%
		30 lb. wood pails	3½ lbs. per pail
	Canadian	100 lb. bags	1 lb. per bag

*African cocoas (Accra, Lagos, St. Thomé, etc., are sold on actual tares.
†Not definitely standardized; see treatment at beginning of article.

of subtracting this tare from an easily-established gross weight, it is possible to arrive at the actual net without unpacking; likewise to determine the extent of any losses which may have occurred since the goods were packed.

The system requires great attention to detail on the part of the packer, who is quite human, and constantly on the lookout for short cuts. So that on certain items where the tare is not sufficiently standardized, he may take the average weight of a few of the total number of packages as the basis of allowance for the entire lot. This allowance, known as "average tare," is subject to several apparent disadvantages.

The allowance of actual tare extends to at least ninety per cent of the materials we buy. Typical examples are refined sugar; boxed or barreled nutmeats, Chinese peanuts, African cocoas; dried, drained and crystallized fruits; cocoanut, etc.

But the use of the word "actual" does not bring the indicated tare any nearer its actual weight if the packer should happen to make a mistake or deliberately falsify the tare. Likewise, physical variations in the thickness of cases and wrappings, the use of dried-out lumber, etc., might result in his striking an "average" somewhat lower than the weight of the packages you receive. Discrepancies of this nature are awkward to determine and still more difficult to prove. Yet, since they "raise" the computed net weight, the game is worth the candle.

The problem brings to mind a sale of thirty barrels of pecan halves made to a manufacturer by one of the smaller shellers about a year and a half ago. The gross barrel weights conformed to the shipping tally and the goods were reported in at the indicated tares. Because the manufacturer had been out of pecans for several days, some of the barrels were pressed into service at once. The amounts "weighed out" (which ordinarily are deducted successively from the total net weight of the lot, shown on the perpetual inventory) for once came under immediate comparison with the indicated net of the barrels to which they applied. It developed that every one of the thirty barrels had been "under-tared" from a pound and a half to two pounds.

What do you suppose was the packer's alibi? A lot of his barrels had been returned to him for re-use and he had neglected to erase and correct (?) the old tares!

It should be part of every receiving clerk's formula that the more expensive the material, the greater will be the loss through fraudulent or inaccurate tares. Where his check of a proportionate number of packages indicates an extensive mis-marking, and the entire lot cannot be tared immediately, notify your supplier, mark the packages with a lot number, and before they are destroyed or surrendered for salvage, have them identified and weighed.

The possibilities of loss through this source are fully apparent to the sheller who writes: "All of our weights are double-checked (including tares). The weights are taken on separate scales, each weigher acting in ignorance of the other's tally. The barrels are numbered. . . . When the tally sheets meet in the office, any differences must be reconciled before the barrels are shipped out." This system, entailing a double overhead charge for weighing, is his assurance that the weights were accurate *when packed.*

While the difficulties of verifying the net shipping weight often preclude the allowance of actual tare, this basis offers distinct advantages over its alternatives, customary tare and gross for net. The likelihood of loss, whether through mistake or design, is reduced to a minimum; the buyer is aware of his exact poundage at all times, permitting both parties to figure their costs with equal facility.

Customary Tares

The allowance of actual or real tare presupposes a package which will not vary appreciably in weight from the time it is packed. It has been found from experience, however, that certain tares influenced by such conditions as soakage, will so vary as to cause substantial discrepancies in the net weight. Obviously, where these variations occur there must be some understanding between buyer and seller as to who shall stand the loss.

Apparently an outgrowth of the average tare idea, customary tare is a fixed allowance of so many pounds or such and such per cent off the gross weight of the material (the packages of which are presumed to be of uniform size and weight). The extent of this arbitrary allowance is determined, as the name implies, by the custom of trade affecting the commodity to which it is applied.

To comprehend the signifiance of this transition from actual to customary tare, it should be explained that on certain items (for the most part having no relation to candy), an allowance is made to the buyer for the loss which he sustains through soakage, and by soakage is meant the permeation of a moist or liquid material through the pores of its container. On tallow, for instance, the buyer receives a soakage allowance of two pounds.

With customary tare, on the other hand, the shipper says to the buyer, in effect, "You must pay me for what I have delivered to you. Some of it may have soaked into the package. But it's all yours; take it if you can." In this respect it resembles "gross for net," where again the buyer is made to pay for things he doesn't get. For what other reason did the cottonseed oil pressers discard the measuring stick for the delightfully misleading gross weights of the weighing platform?

Daily the use of liquid measure becomes more obsolete as a means of computing raw materials. Think for a moment what a great num-

DO YOU KNOW:

—when and to what extent you are entitled to an allowance for tare?

—The difference between customary, average and real tare?

—That so-called "actual" tare may be actual only when the goods are packed?

Mr. Lund says, "It is the constant attention to numerous details, which, though seemingly insignificant in themselves, collectively make possible the huge savings of scientific purchasing." Just such a detail is tare.

ber of fluid materials are used in the candy industry. What proportion of them is sold by the gallon? Corn syrup, invert sugar, condensed milk, domestic honey, cocoanut oil—not these, certainly.

A glance at the list of materials sold to us on the basis of customary tare reveals cocoa, gum arabic, maple and cane sugar, where a condition analogous to soakage, namely, the clinging of material to the bag, apparently furnishes justification for the use of this tare. (The extent of the various soakage losses will be treated fully in an ensuing article.)

Following are the customary tares applicable to materials used in candy:

There has been a gradual transition in the method of computing customary tares, from a percentage to a poundage basis. The logic of change is illustrated in the case of Vermont maple sugar where the original tare of the wood pail was 10 per cent. Because sugar put up in tin begins to "work" long before that which is put up in wood, the farmers make a practice of packing and selling their tin stock first. By the time they commence packing in wood, their production has fallen off to a point where their deliveries to market show a corresponding proportion of tail-end or partly-filled pails. To allow 10 per cent tare on these pails would involve a loss to the dealer, hence the more accurate basis of 3½ lbs. per pail.

The reversion to actual tares on pignolias which for years have been sold in cases taring 26 to 30 lbs., on an allowance of only 25 lbs. per case, is significant of the power of buyers collectively to bring about needed reforms and standardization.

Gross for Net

The "gross for net" method of disposing of the tare problem is the antithesis of actual tare. Instead of the buyer's being allowed to deduct, he must pay for the package along with the contents.

The origin of this negation of the tare allowance is not clear, but it seems to have owed its popularity to two things: the fact the materials to which it was applied were originally less expensive than the bags or other wrappers in which they were packed; while the bag itself represented but a small proportion of the gross weight. Thus the shipper gave the buyer the benefit of the difference between the value of the bag and the value of an equivalent weight of raw material by "throwing in" the bag.

The packer's position was tenable so long as the price of the raw material did not exceed that of an equal weight of bag. But recently, when we have had almonds selling at 45 to 50c lb., not to mention filberts as high as 28c, both "gross for net," the tables have been turned on the buyer!

Every effort to restore these items to an actual tare basis has met with failure. Why? Because the buyer (and we use the term in its generic sense) refused to countenance the distinction between "net" and "gross for net" in determining which price he should pay! He bought from the supplier with the lowest price, overlooking the tare allowance, whose absence increased the actual cost of his material from a cent to a cent and a half a pound. The last house to try to sell filberts and almonds on a net basis decided about five years ago that they would have to go back to G. F. N. or retire from the nut business.

"Gross for Net" A Parasite to Profits

There is yet another phase of this matter which enters into vital relationship with our costs. When we buy on "gross for net," net weight ceases to be the unit of poundage, and unless we employ a correction factor, it is the gross weight which figures on our inventories and in our costs.

A certain portion of our purchase cannot be availed of in the finished product. If we report into "goods in process"—220 lbs. of almonds at 40c lb. and the *net* contents of the bale is 215 lbs., we have created for that material an *actual* cost of 41c lb. If, then, we fix our selling price on the basis of 40c almonds, we have caused our factory to suffer a loss of 1c lb. through *diminishment of profit*. Yet that is the way in which the majority of confectioners figure their selling prices today.

Bales and Sacks vs. Boxes for Nut Meats

On baled almonds and filberts we must allow a loss of 1½-2 per cent (the tare ranging between 3 and 5 lbs. on 220 lb. bales, and proportionately higher on double sacks).

We must also remember that almonds in bales, G. F. N., are offered in direct competition with box goods on which actual tare is allowed. Since the usual differential between these two types of package is 1c lb., the supplier contends that it will work out practically the same in the long run, whether the goods are bought one way or the other. Let us see if this is so.

In our illustration we considered bale almonds at 40c lb.; adding the differential, box almonds would come to 41c. But at 40c lb., gross for net, the net price of bale almonds might also come to 41c. So that with little or no price saving on bale goods, the greater percentage of dust to be found in this type of package, not to mention the likelihood of a greater percentage of pieces, might easily make boxes a much more attractive and economical purchase.

Both from the standpoint of price economy and insuring the material against physical damage, the wood box looms into greater favor as the value of the almond increases. On the other hand, where the goods are to be transported, or hauled or carried in public storehouse for any length of time, the added cost of carrying the additional tare may completely outweigh the economies of the box. The difference in tare between a "220 lb." gunny sack and eight "28 lb." wood boxes is more than half a hundredweight, and it would be well to take this into account on any stock of box goods which you may be planning to carry. (To carry box tare in storage for 6 months at 20c cwt. adds ¼c lb. over the cost of carrying bale goods; freight and cartage in like proportion.)

Following are the materials ordinarily sold to the manufacturer on a gross for net basis:

Shelled almonds and filberts in bags or bales.

Unshelled nuts, in bags.

Smyrna natural figs, etc., in bags (local purchases).

Portuguese tapnet figs (out of seron, for which allowance is made).

Domestic peanuts.

Apricot pulp, etc. (The so-called "net weight" as a rule includes the can.)

Certain vegetable oils, etc.

The familiar symbols "G. F. N." owe their popularity to expediency, only one set of weights being required. But whatever may be their merits on figs at 6 to 8c lb., they have outlined much of their usefulness when they come to be applied to items like fancy "flot" almonds around 55 to 60c lb. Then, too, a high priced almond such as this will often come packed in double bags separated by straw to prevent the nuts from becoming bruised. The tare on these bags is seldom less than 7 or 8 lbs. so that the desirability of this method of packaging is somewhat offset by the concealed cost to the buyer of from $4.00 to $5.00 per bale!

Until buyers generally are made to realize what they are sacrificing to expediency—until they figure the inroads which these various methods of false, negative or inaccurate taring are making upon their costs, there can be no hope of standardization in this important detail. They must know that "tare" is something more than the mere dictionary definition of a "deficiency between gross and net weights"—a something tangible—big enough to be worth going after—an intimate and fundamental unit in the purchase price of every raw material they buy.

(*This series continued in next issue*)

COMING

Care of Raw Materials In and Out of Storage

50 Desk Tests for Raw Materials

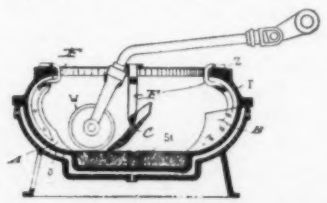
WHAT'S NEW?

Patents

1,474,004. Candy-Cutting Apparatus. Edmund W. Roberts, Cincinnati, Ohio. Filed July 24, 1922. Serial No. 577,025. 4 Claims. (Cl. 107—51.)

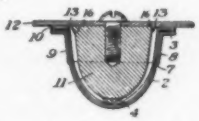
1. A candy cutter comprising a cylindrical axle, a plurality of disk-shaped cutters mounted and adjustable endwise upon said axle and spaced at intervals longitudinally thereof, a coiled spring carried by said axle under tension and to different loops of which spring said respective cutter disks are attached, and means to vary the tension upon said spring to thereby adjust said cutter disks to different positions endwise of said axle and to different relative spaced relations.

1,475,579. Device for Forming Chocolates. Milton J. Harlan, Chicago, Ill. Filed Jan. 19, 1922. Serial No. 530,248. 2 Claims. (Cl. 107—1.)



2. A device for mechanically forming filled confections in cups, said device comprising an endless conveyor, means for driving the same, bars forming a part of said conveyor having pockets therein for carrying cups in which the confections are to be sold, guide members for causing the upper lap of the conveyor to travel first in a horizontal upright position, then in a horizontal inverted position and then back into a horizontal upright position, feed tanks mounted above the upright portions of the upper lap of said conveyor to permit successive fillings of the cups carried by the conveyor bars, retaining screens mounted below the inverted portion of the conveyor for supporting and holding the cups in position during the time they are traveling in an inverted position, a drip pan beneath the retaining screens for receiving material discharged from the inverted cups, and ejecting mechanisms at the end of the upper lap of the conveyor for pushing the filled cups out of the bar pockets.

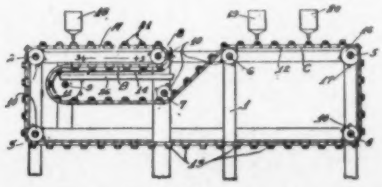
1,472,229. Confection Mold. Charles A. Plempel, Pittsburgh, Pa. Filed Mar. 6, 1922. Serial No. 541,528. 7 claims. (Cl. 107—19.)



1. In a mold for confections, a receptacle having an offset portion, a ring telescopically engaging said offset portion and adapted to be withdrawn to remove a molded confection, and a core adapted to cooperate with said receptacle and ring, substantially as described.

2. In a mold for confections, a receptacle having an offset portion, a ring telescopically engaging said offset portion, and a core adapted to cooperate with said receptacle and ring, said core having an operating means by which surplus material may be easily removed from the molded article, substantially as described.

1,474,945. Device for Treating Chocolate Masses or Other Materials. Friedrich Franz Wilhelm Schildener, Zschieren, near Dresden, Germany. Filed Aug. 8, 1921. Serial No. 490,767. 5 Claims. (Cl. 83—45.)

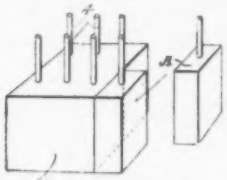


1. In a device for treating chocolate masses and the like, a container adapted to receive the mass, a reciprocating member mounted for travel in a rectilinear direction for agitating the mass, and means arranged within the container and movable relatively thereto for travel in a circular path to direct the mass centrally from the wall of the container into the path of the reciprocating member.

1,470,524. Process of Making Frozen Confections. Harry B. Burt, Youngstown, Ohio. Filed Jan. 30, 1922. Serial No. 532,811. 7 Claims. (Cl. 107—54.)

1. The process of making a frozen confection which consists in bringing a handle member in contact with a body of edible substance which is fluid at normal temperatures and subjecting the body to refrigeration whereby it is solidified and thereby attached to the handle by congelation.

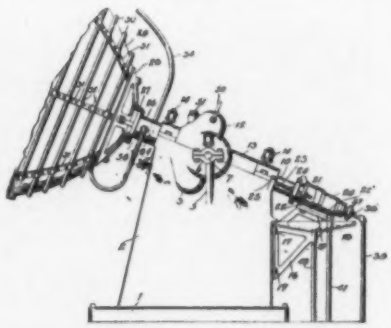
5. The process of making a frozen confection which consists in bringing a handle member in contact with a body of edible substance which is fluid at normal temperatures, subjecting the body to refrigeration whereby it is solidified and thereby attached to the handle by congelation, and applying a protective outer



coating of a material which is hard at normal temperatures to the frozen body portion while it is supported by the handle member.

7. The process of making a frozen confection which consists in taking a body of frozen edible material which is fluid at normal temperatures, applying a protective covering of edible granules to the exterior of the frozen body, and subsequently chilling the body to bring about a firm attachment of the granules thereto by congelation.

1,471,429. Candy Coating Machine. Harvey Ray Wallace, Brooklyn, N. Y., assignor to Loft Incorporated, New York, N. Y. Filed Mar. 18, 1921. Serial No. 453,524. 3 Claims. (Cl. 184—106.)



2. A machine of the class described, including a base member, a standard in the form of a casing rising therefrom, a bracket attached to one side of the standard, a bearing plate carried by said bracket having a receiving receptacle carried by the bracket and arranged beneath the bearing plate, said receptacle being substantially larger than the bearing plate.

THE SALES DEPARTMENT

Helping the Retailer Sell Candy

The Second of a Series on Selling Confectionery

By J. George Frederick

President The Business Bourse and Author of "Modern Sales Management"

IN THE past 15 or 20 years the aggressive manufacturer of almost any kind of goods sold through retailers has had to do more and more of the work of selling, that is, of the final distribution of the goods to the consumer. In fact, he has had to change his whole idea of selling. Once he simply made the dealer his object of effort and attack, sold him as much as possible, and then stopped right there. Today the successful manufacturer knows that it is really up to him to do much of the re-selling of the goods after he has sold them to the dealer and they are on the shelf.

We therefore have today a surprising amount of "dealer help" effort on the part of the manufacturer. Why? Well, because the dealer is, as a rule, not a highly trained merchant, but an average man—often below the average as a merchandiser—who has no means of acquiring modern high-class retailing education and "pep" except through the manufacturer. The manufacturer who can't supply it just naturally gets left.

A Working Partnership with the Retailer

It would amaze some of the manufacturing confectioners in this country to learn how brilliantly and in what detail some of the big successful manufacturers in this industry have worked out their "dealer help" campaigns. They almost compel the retailers to make good; certainly they do not miss many tricks in making sales for their retailers who will co-operate intelligently. The retailer is hungry for more profits, but naturally he must be sold on the "dealer help" almost as much as he must be sold on the goods.

It has thus come about that candy salesmen should not only be candy experts, but also retail selling experts, at least, that is the ideal aimed at by successful manufacturers. The prosperity of the dealer is not only the prosperity of the manufacturer, but it is the recgonized responsibility of the manufacturer to do as much as possible to make his dealers prosper.

The foundation work for national distribution, for national advertising, for consumer knowledge, for steady sales and good business is a working partnership with the retailer, not merely a buyer-seller relation. Even if the retailer is live and alert there is a need for the additional brains of the up-to-date candy manufacturer's salesmen, who are much better informed (or should be) as to new methods of sales promotion than the dealer.

There is everywhere in the confectionery business a feeling that the average retailer is no merchant and does not push sales; however, al-

most as strong a case can be made out against the candy manufacturers for not doing their share in helping their retail distributors to merchandise their goods.

Getting Selling Helps Properly Displayed

Much can be done if the interest of retailers is aroused in a graphic way. Interviews with successful candy manufacturers who have already succeeded indicate that there are a number of kinds of profitable dealer helps. Good posters and lithographed window trims or "cut-outs," for instance, attractively designed have much pulling power if—and it is that "if" that the manufacturer must eliminate. Posters *properly placed* are of undisputed value. For instance, a dozen posters, prominently placed in the store windows of candy retailers along a main traveled street, will almost invariably result in a certain percentage of sales increase. The psychology of repetition operates. Seeing a thing often enough makes the consumer want it.

To get the posters into their proper places, in connection with a proper display of either the candy or the dummy package is usually up to the manufacturer or his force. The retailer is busy. He has, if he is a druggist, several thousand items to look after and after all candy is but five per cent of his sales. If he is a confectioner he has many other lines plus a soda fountain and perhaps a luncheon service. He doesn't usually care if the manufacturer or his salesmen want to go to the trouble of fixing up his windows, but he sees no reason why he should be annoyed on a busy day. He is almost always skeptical as to the drawing power of the salesmen's plan. He has seen a lot of salesmen who made rosy promises that died in infancy. It is clearly up to the manufacturer to do this and let results speak for themselves. This is about the least expensive type of advertising that there is, and, when properly planned, one of the most effective. But salesmen must themselves know how to put up signs and dress windows.

A consumer gets one urge from an effective poster and an attractive window. The urge is repeated when the window is repeated. A few repetitions and the urge is translated into a desire. The sale is 50 per cent effected. If the manufacturer or his representative has, in addition, gotten the interest of the salespeople in the product, the completion of the sale is sure. If not, the urge for this particular type of candy may be transferred to some other known kind.

Using the Unit Purchase Price Plan

In the matter of completing the sales, not only the interest of the salespeople, but also the method of displaying the goods must be considered. Display not only has a marked effect on sales, but it also influences quality to an important degree. If the candy is in bulk form, the display must be such that the candy is clean and attractive and kept so that its freshness does not disappear quickly. With the better retailers, proper display cases are usually provided, but many manufacturers are supplying their own.

The five and ten cent stores always maintain excellent displays of bulk candy, and these ideas may be easily copied by the average retailer. The manufacturer will usually find it profitable to help their retailers in the display of not only his own kinds, but all brands handled. The chain store plan of having the candy already weighed up into five and ten cent quantities, and all goods plainly marked as to the number of ounces that can be purchased for any small specified sum, is a good one to follow. Particularly with the neighborhood stores, as bulk candy makes up an important part of the whole, and most of the sales are in small quantities. The children have a penny, a nickel or a dime to spend, and it is profitable for the dealer to specify plainly just how much, or how many pieces that amount will purchase. Even with

the grown-ups, such small sales are often possible when the exact amount of candy is indicated.

The smaller retailers, as a class, do not appreciate the value of display. This is particularly true in the case of the small druggist. He usually does make an effort to place his boxed candies in proper and prominent places. This is partly because they are heavily advertised, and this publicity is of value to him, and partly because they are ornamental and lend themselves to the decoration of his store. On the other hand, bulk and bar goods are only too often piled around in an unattractive manner. It may be displayed in the ordinary pasteboard box in which it came, or it may be dumped onto dusty counters. Bar goods are frequently piled wherever the shelves or counters permit, without order or design. This is not true in the larger and more progressive stores, but these, after all, do not constitute the majority of the retailers of candy. It is for this reason that live manufacturers have come to make the containers serve as store displays and signs. It is becoming a problem to retailers how to attractively display the large number of small candy items. He has a right to look to manufacturers to help in this problem.

Whether the sales program of the manufacturer includes the use of local newspaper advertising or not, dealer helps are absolutely essential, both as an incentive to the dealer and to the jobber and to tie up with the newspaper campaign. Special discounts or introductory deals may also be necessary. The market is now so crowded with a great variety of candy items that dealers are bound to be conservative, and will not add new lines except for strong reasons. Sometimes the personal element may be more effective than deals or extra profit. A service in solving a display problem, or especially live dealer help material does a great deal to get retailers into the frame of mind to believe in and push an article.

Dealer helps that are also advisable are small folders or booklets that can be wrapped with packages. Nothing very elaborate should be attempted as much of such literature is lost.

Any regular communication with dealers that is of sufficient interest to insure its being read is valuable, as the small manufacturer is necessarily limited in his ability to keep in personal touch with such dealers. Monthly letters or bulletins, in which timely suggestions may be made as to sales, window trims or displays may be made profitable. Anything, in fact, which presents educational matter in connection with the goods in such a manner that it is interesting enough to be read will pay for itself.

Sampling

Sampling is another much discussed method of advertising upon which opinions differ. Many manufacturers believe that sampling, if carried to a point of adequate return, is too

costly to be justified in the small business. However, there are many examples of sampling that are interesting. The secret appears to be in the degree to which the maker gets in personal touch with the customer. That is, the miscellaneous distribution of samples through house-to-house distribution or through dealers is not usually successful.

The distribution of samples—in the case of candy this means usually a "taste"—through retail stores operated by the manufacturer is often an excellent plan. The Martha Washington candy stores have used this plan effectively. The distribution of samples through coupons or in retail stores by means of miniature boxes which may be priced to the consumer as low as ten cents, is conceded to be good advertising. The consumer appreciates this type of sample because it represents value received. The company is enabled to get its products into the hands of the consumer without loss. This type of sampling is, however, primarily suited to trade-marked goods only. In the case of bulk candy, it is advantageous in some stores to place a dish of the candies where it is accessible to candy buyers, but much of the success of this method of sampling depends upon the class of customers. If they are discriminating buyers, this would be effective, although too expensive to be continued over any long period of time.

In no event should the candy manufacturer omit to arouse the personal interest of the dealer if he can. If the dealer understands clearly just what the manufacturer is trying to do, under what odds he is working, and as much about the candy as he will absorb, the manufacturer has a much better chance to get active co-operation than if the dealer merely regards it as "candy" on which he makes such and such a profit. Many dealers are classed as ignorant and indifferent because they do not understand the products they handle or the aims and ideals back of such products and their merchandising. What are you manufacturers of candy doing to help your retail distributors to be better merchants and thus sell more of your candy at a profit?

IMPROVE AFRICAN ALMOND SHIPMENTS

As a result of a recent decision on the part of Moroccan exporters to sort out the bitter almond, it is now possible to secure Moroccan almonds in five distinct grades, the highest of which contain less than 2 per cent of the bitter variety. Previous to the war, almonds from this source had fallen into disrepute in all markets because of the inaccurate statements made regarding the percentage of bitter almonds in shipments, the Department of Commerce is informed by Vice Consul Chas. I. Graham, Tangier. There appears to have been some improvement in this respect in recent years, and contracts can not be made whereby deliveries conform more reliably to specifications and the percentage of bitter almonds appearing in the shipments can be approximately guaranteed.

Material Handling Methods and Equipment

The Twelfth Article of an Extensive Series on

Candy Factory Management Methods, Factory Practices
Material Handling, Labor Management, Etc.

Based on personal interviews with manufacturing confectioners and a special investigation of their manufacturing problems

by Ralph G. Wells

Member Committee on Industrial and Commercial Planning, Boston Chamber of Commerce.
Member of Faculty, Boston University—College of Business Administration.
Formerly President National Association of Employment Managers.

Exclusively for The Manufacturing Confectioner

MATERIAL-HANDLING methods have been developed to a remarkable degree in the candy industry, especially among the more successful firms, and it is significant that, in discussing ways and means of lowering costs, of increasing output or of improving quality, experienced candy men sooner or later bring in the question of the automatic handling of raw material or stock in process. Those who still cling to the tradition that hand-made goods are always superior to the machine-made product will disagree with the latter portion of the above statement. Nevertheless, these skeptics are due for an awakening some day, for in this day of quantity production and widespread distribution quality is uniformity of taste, of texture and of appearance. This can only be secured on a large scale by the extensive use of automatic equipment which will reduce to a minimum not only the cost of handling, but also the opportunity for mishandling, neglect and error by individual workers.

If a firm wishes to keep its product upon a competing basis with the candy made by leaders in the industry, a careful study should be made, not only of manufacturing standards and processes, but also of the methods of handling material in order to select the most efficient and most economical method of automatic handling which will insure the maintenance of uniform quality at all times. Such studies generally show the economy of substituting conveyors and other modern material-handling devices for hand labor throughout the plant.

Results from Automatic Handling Equipment

It has been found that the use of such equipment accomplishes the following results:

(a) Texture and appearance of candy is more uniform where it is conveyed from one operation to another automatically, thus avoiding repeated handlings and jarring by employes.

(b) Output per machine, per employe and per square foot of floor space is greatly increased.

(c) Plant capacity is more flexible, as production can be boosted or decreased on short notice without waiting until more help can be secured.

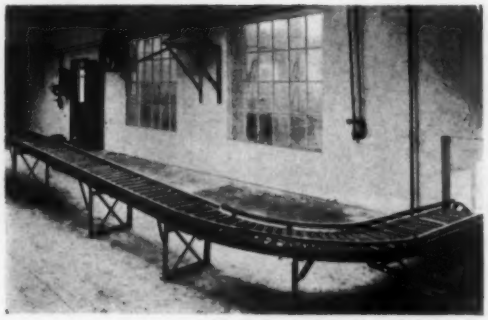
(d) Fewer employes are required to operate plant at full capacity, thus reducing the labor problem.

(e) Operations are simplified, permitting the use of inexperienced help to a greater extent. This in turn simplifies the training problem.

(f) Costs are reduced more than enough to pay for cost of installation.

(g) Scrap, waste and damaged goods are reduced through the elimination of careless handling.

One candy superintendent said: "It is unfortunate that some manufacturers consider the installation of labor-saving methods in the handling of candy an expense that they cannot afford because of the investment involved. Our experience has been that we cannot afford to be without such equipment if we are to turn out large quantities of high grade goods at a price that will interest the jobber and the dealer. Furthermore, it has been our experience that the installation of economical methods of handling material is not as expensive as it seems. It is more a question of planning and ingenuity in the use of standard equipment. Compared to the saving effected, the cost of such equipment is very small."



Gravity Roller Conveyor.

Conveyor System, Bradley-Smith Co., New Haven, Conn.

How Conveying Machinery Pays

Output is increased by the use of conveyors because machines and workers are kept constantly supplied with a uniform flow of material, and the finished product is taken away from working places to the next process as rapidly as it is manufactured. This avoids the cluttering up of aisles, the accumulation of large piles of work and the blocking of operations which occur so frequently where the movement of material is done by old-fashioned methods. Many a troublesome "choke point" or "bottle neck" has been relieved and the output increased by putting in an automatic conveyor or two.

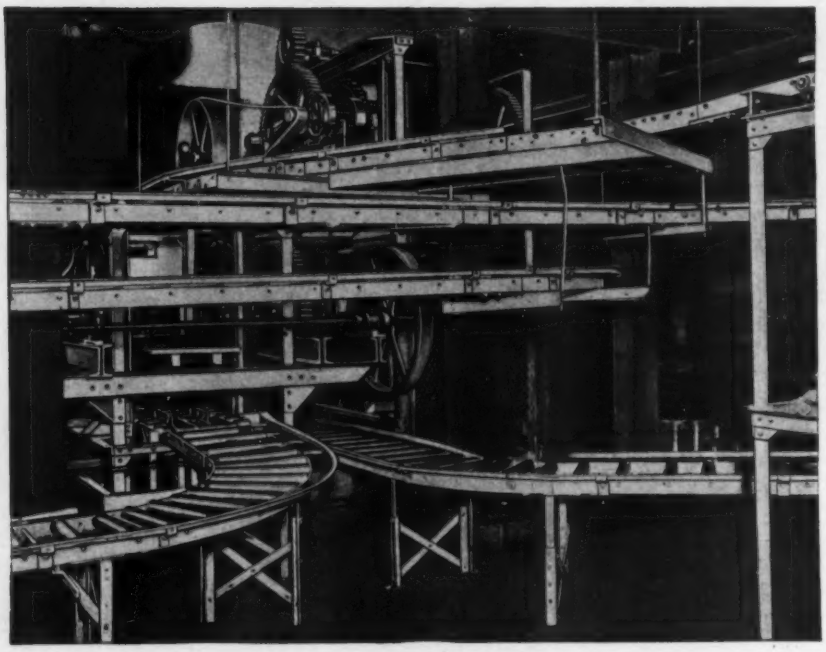
Perhaps the greatest of the advantages of automatic conveying and handling of material enumerated above lies in the reduced labor force needed and the wider flexibility which is given to the plant. During rush periods the firm whose factory is well equipped can turn out a much larger volume of product proportionately for the available number of employes than their competitors can, as mechanical equipment can be speeded up much more easily than individuals. One illustration of this is the modern electric self-loading truck with detachable skid platforms, which makes it possible for one operator to handle enormous quantities of goods in rush periods, merely backing his truck up to the skid on which goods have been previously loaded, and hauling them away speedily to the next point, dropping them and returning for another load in less time than the old type hand truck could be loaded and unloaded. Time is saved not only because a larger quantity can be transported at one time than can be done with a hand truck, but because goods do not have to be handled except when they are being worked on.

The automatic traveling packing belt is another illustration. The number of girls working on either side can be varied at will.

There are a few general principles which should be kept in mind in planning the movement of goods through the plant. Arrange departments and machines in as nearly logical sequence as is possible. All equipment should be laid out in each department to permit a continuous progress or flow of material or work through the workroom. Back tracking is to be avoided and machines should be as near to each other as the nature of the work will permit; ample aisle space should be allowed for the passage of trucks.

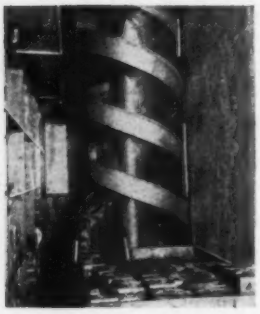
Wherever possible, material or work in process should be handled by gravity, or at least by automatic machinery. The ideal arrangement is to have the raw material elevated to the top of the building and passes down through the

Gravity and Belt Conveying System, Wrapping Department, The Cowan Co., Toronto, Ontario.



Illustrating a Choke Point Relieved by Conveying Equipment.

Spiral Chute.
Touraine Co., Boston



Spiral Conveyor.
Patterson Candy Co., Toronto

various processes by gravity; sugar and corn syrup should always be handled in this way. Sugar should come down a chute to where the batch is being prepared and drawn off only as needed—no bags of sugar or surplus material lying around.

Flour, for instance, is handled automatically by machinery from the time that it starts until it is packed in bags and barrels. Such an ideal arrangement, of course, is not possible in candy factories; nevertheless, the principle should be kept in mind in studying possible improvements. Great strides have been made in this direction and there are plants today where the material is conveyed automatically from one end of the plant to the other, with the exception of one or two places where it is necessary to allow the work to remain in storage or to ripen.

1.—TYPES OF CONVEYORS

There are many different types of conveying machines in use in confectionery plants. Those most frequently met with are as follows:

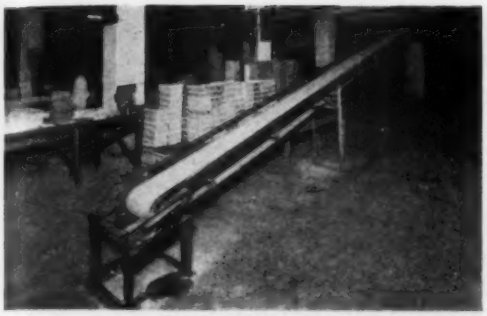
1. Continuous or Endless Belt Conveyors

These are made in great variety. Belts are frequently of fabric material filled with rubber or some other compound. They are also made of wire screen, wooden slats, steel or woven links, depending on the purpose for which they are used. As an illustration, one type of screen belt is used in enrobers to convey centers through the chocolate liquor, while the smooth surface belt is used to feed the machine and take dipped centers away. Endless belts are particularly valuable in moving material from one machine to another, and are also used in packing rooms to convey candy in front of the girls who are packing boxes and to take packed boxes away. Belts may be used to carry candy or boxes from one floor to another if the angle is not too great and if slats are placed across the belt to prevent the load from slipping backward.

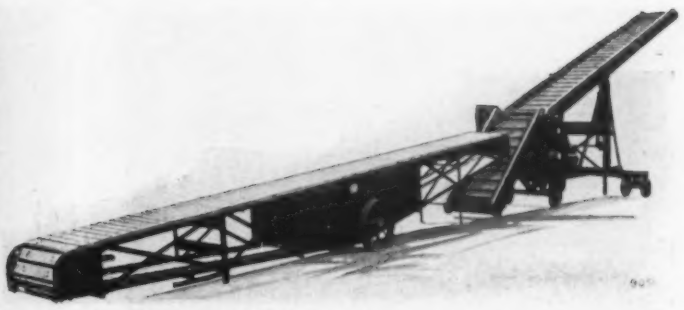
In some places, endless belts are used to feed cocoa beans, sugar or other loose material into hoppers. When so used, they are made to discharge material whenever and wherever desired by the simple device of placing a slat of wood at an angle across the belt so that the material will be scraped off at one side into the hopper. This is frequently accomplished by a swinging gate built in the frames at the side of the belt and so arranged that they may be swung inward across the belt at an angle, leaving an opening through which the material can be discharged. Turns may be made in the movement of material with endless belts by having one conveyer discharge onto another belt running in a different direction.

2. Gravity Roller Conveyors

These consist of small rollers mounted on a frame so that heavy boxes and other packages may roll along by gravity. These can be built either in straight or spiral stretches. Roller conveyors operated by power may be used where there is not sufficient drop to cause the material to move by its own gravity. Angle turns can be secured with roller frames also by having one frame discharge onto another frame



Chas. N. Miller Co., Boston, Mass.
Belt Conveyor.



Portable Piler Unit with Endless Belt Trailer

running at a different angle. Sacks and other loose packages cannot be handled on roller frames—belts are better in such cases.

3. Gravity Chutes

These consist of inclined chutes, straight or spiral, generally used for sliding boxes down from one floor to another. The sides must be high enough to prevent boxes from sliding off at the lower end and should be curved upwards at a sufficient angle to check the momentum of the package. These are useful in loading trucks or box cars from a second story shipping room. The lower end of such a slide can be hinged to draw up out of the way when not in use.

4. Gravity Feed Pipes

Gravity feed pipes used for feeding sugar, syrups or other material from a storage bin or tank to hoppers of the machines or a central distributing point. Dry materials can be handled in sheet iron pipes or wooden chutes, but liquids must generally be pumped through iron pipes.

5. Hoists

There are a number of different types of hoists which can be used conveniently in candy plants. The hand-operated chain hoist is convenient for lifting bags and boxes and for handling machinery that is being repaired. With the right kind of rigging, hoists can be used to dump barrels and heavy boxes. They are also useful in getting material out of cellars or cars.

In laying out a candy factory it is well to provide places in the ceiling from which hoists or tackle blocks may be hung so as to facilitate the handling of heavy machinery. Every plant should also have a small portable derrick for use in any part of the plant where it is necessary to do heavy work. It is now the practice in building modern power plants and machine shops to install as a part of the regular equipment some hoisting devices which will simplify repair work.

6. Portable Pilers

A portable piler is a small portable endless belt conveyor unit equipped with an electric motor to operate the belt. The steel frame is adjustable, so that while the lower end of the belt is about 18 inches above the floor, the upper end can be adjusted from a minimum elevation of a little over 5 feet to a maximum elevation of from 10 to 14 feet, depending on the size of the unit. Such portable conveyors are useful in piling material in warehouses or in unloading cars and elevating material to a point where it may be conveyed further by gravity or roller conveyors. An endless belt trailer unit can be secured with this equipment, giving a great flexibility to the purposes for which this device may be used. By the use of such units as boosters in gravity conveying systems, material can be made to travel almost any distance at a very slight expense.

7. Elevators

With the perfection to which automatic loading and unloading devices have been developed for elevators, it is now possible to feed material either from belt conveyors or roller frames direct to an elevator which will automatically pick up the load, carry it to any height in the room, or to floors above, discharging the load again automatically onto another conveyor when desired. This greatly simplifies the movement of material from one floor to another and enables the moving to be done in very short distance. Such automatic elevators of the smaller type are frequently used to lift boxes and trays of candy from one level in a room to a higher level in the same room, so that they may pass over the heads of workers out of the way to another place in the room. This is the device that is used in some equipment to secure cooling and hardening of candy in a short distance.

The Self-Loading Hand Lift Truck Picks Up the Loaded Skids or Platforms.

There are numerous types of automatic elevators. Some are of the arm type, arranged for lifting bags and barrels to upper floors; others are equipped with platforms, boxes or buckets. One firm has installed an escalator running from one floor to another, so that workers can be carried up with their loads quickly, thus avoiding the delay that is necessary in waiting for elevators.

8. Trucks

The recent development of industrial trucks has been a great boon to manufacturers in moving large quantities of materials from one part of the plant to another. There are several types, each of which has its parteiular advantage. One of these is the self-loading truck, which comes equipped either with a hand or electric lift and is so designed that the frame can be pushed under a special type of skid or platform and lifted up so that it may be hauled to any part of the plant. This self-loading truck saves a great deal of rehandling of material, as the platform on which the material is carried is left at the place where the latter is to be discharged. The use of detachable platforms makes it possible for one truck to do a great deal more work than was possible where the platform was permanently attached.

Another type of truck is the hand elevating truck, which is of great assistance in the piling or stacking of heavy material.

Uses For Automatic Material Handling Equipment

There are many places in the average confectionery plant where automatic conveying and handling equipment can be used to advantage. As an illustration of what is being done and what can be done, there is given below a list of suggestions for material handling which have been gathered from various sources. Owing to space limitations, these must necessarily be very brief, but detailed descriptions will be supplied any subscriber on request.

Receiving and Shipping

Elevate driveways and spur tracks so that beds of trucks and freight cars will be high enough to permit unloading by gravity chutes or roller frames. If stock and shipping room are on second floor, trucks and cars may be loaded by gravity chutes. If receiving and shipping are done from first floor, then driveways and spur tracks will want to be depressed to bring beds on level with street floor. Where space is available, it is an advantage to have an outside covered or enclosed platform, as doors of shipping room can be kept closed and temperature of room controlled. Many firms use electric trucks for loading and unloading cars, as these can be backed clear into the end of cars if desired. A portable power conveyor and piler unit is also used in both loading and unloading. Goods placed upon it are elevated to a sufficient height and then run onto a gravity conveyor which takes them to their destination.

Receive, inspect, open, count and clean material on ground floor if possible. Store surplus stock on receiving floor to save rehandling. Have elevating conveyors to take current supplies direct to feed hoppers on upper floors.

Stock and shipping rooms should be connected by suitable conveying facilities to permit filled orders to be conveyed direct to place where they are to be boxed up.

Raw Material Stores for Current Use

Such items as sugar, cocoa beans, syrups, etc., can be stored on top floors and fed down by gravity through chutes or pipes, either direct to machines or to central distributing points in each room. If certain materials have to be blended, the hoppers containing them should be arranged to feed down onto a central belt which will convey them to the mixing machine. Some firms have a large bucket or can suspended from an overhead trolley which runs along under the spouts of various hoppers. The proper amounts are put into this container and transferred in it to mixing machines or cooker kettles.

Feeding Materials to Cookers

We have observed one firm that has worked out an excellent method of feeding materials into cooker kettles. Each two, three, or four kettles, depending on their location and arrangement, has a central feed hopper with a graduated spout that can be swung around so as to discharge into any one of these kettles. The hoppers for all these kettles are fed from an endless belt conveyer onto which sugar or other material is dumped from storage bins on the floor above. When a hopper is to be filled, the operator swings the proper gate of the conveyor frame in across the belt and signals for a certain quantity of sugar to be dumped on the belt. This is done, and as it reaches the gate the gate scrapes the sugar off the belt into the hopper. The belt is enclosed so as to keep out dust, and a revolving brush sweeps it clean as it returns on the under side of the frame.

Syrups and other liquids can be easily piped to any point desired. If they do not flow easily, a small steam line or hot water pipe run beside them will warm them up enough so that they will run freely.

Handling Materials in Cream Room

First standardize on the most convenient sized tubs or boats and mount them on skids so that the hand or electric lift truck can pick them up readily. Be sure that skids are of right design so that they can be piled one on top of another. Also provide room with chain hoist mounted on overhead trolley, so that tubs may be shifted about easily.

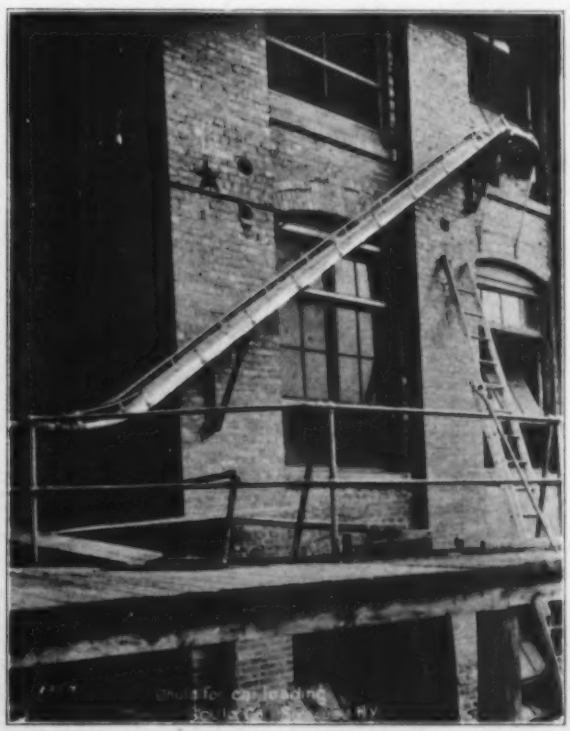
The Starch Room

Starch trays into which centers have been deposited can easily be conveyed automatically into the cooling room. We noticed one firm has the cooling room on the floor above the depositors. Trays as they come off the mogul are slid onto an automatic elevator which takes them to the upper room, where they are discharged automatically onto a conveyor running the full length of the room. From the conveyor they are racked by hand. The process is reversed when trays are sent down to be emptied. Most firms, however, find it more convenient to pile trays on truck skids. When a skid is full, the load is picked up by a hand lift truck and wheeled into the storage room, where it is left until the centers are needed. The skid is then picked up again by the hand lift truck and returned to the moguls. This latter method results in the least handling and jostling of the centers.

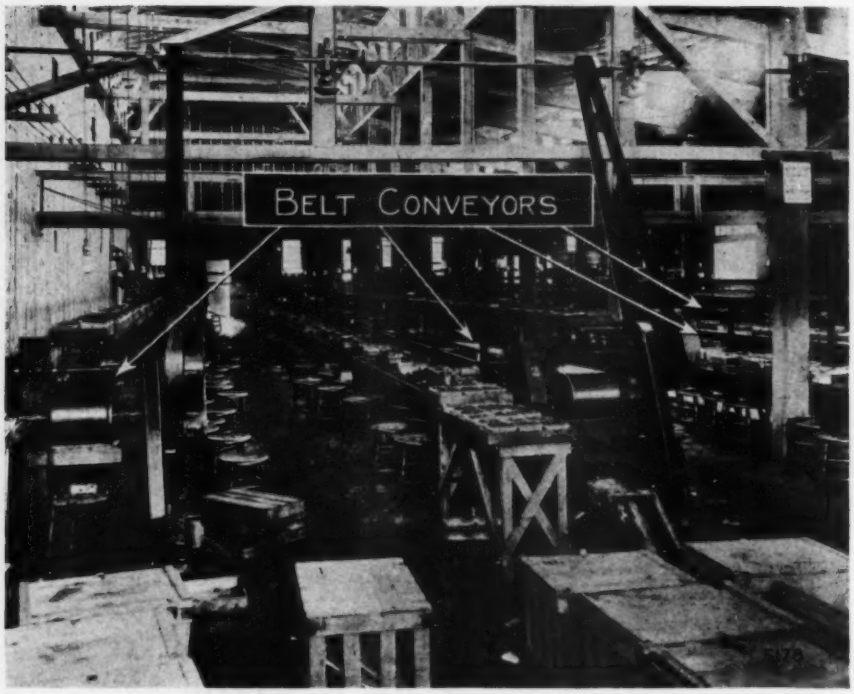
When centers are discharged by the moguls they are sometimes fed onto an endless belt which conveys them direct to hoppers which drop them onto the feed belts of the enrobers. Here they are spaced and set upright, so that they will run through the coating properly. One plant has a series of feed belts so arranged by a system of automatic transfers that practically any group of enrobers can be fed from any mogul.

It is hardly necessary to describe the steps by which covered centers are discharged from enrobers into the cooling tunnels on packing

Inclined Elevator at Nailing Machine.



Chute for Car Loading.



belts, as this is stock equipment to be found in all large factories. However, we find there are a number of different types in use.

Hard Candy and Caramel Rooms

Standard machines for forming and cutting candies of this type are equipped to discharge their product onto conveying belts or direct to automatic wrapping and packaging machines. Descriptions of these will be supplied by manufacturers or the publishers of THE MANUFACTURING CONFECTIONER upon request. If candies are discharged into trays, these trays can be conveyed by endless belts to either the packing room or to the unpacked stock room. Many firms, however, prefer to transfer them by truck.

The Packing Room

In nearly all the large packing rooms the endless belt is a regular part of the equipment. Some plants have several belts in a room. Two methods of packing are followed. In one case the candy to be packed flows past the packers, each one of whom selects from the trays, pallets or boxes the right number of that particular kind to make up the assortment she is packing. This requires that the different kinds of candy be placed upon the belt in the right rotation, as all packers cannot be depended upon to put a uniform assortment in each box unless this is done. Another method of packing is to have the boxes that are being packed pass by the girls and each one puts in certain candies to build up the right assortment. When the former method is used full boxes are placed upon another belt as soon as they are packed. This belt takes the boxes past inspectors and onto tables, where boxes are given their final trimming, weighed and covers put on.

There is considerable difference of opinion among candy men as to the merits of belt packing. Some claim that many centers are too tender to be handled safely on belts. To this objection one manufacturer who has found belt packing most satisfactory makes the very pertinent reply, "Why have centers so tender?" It is his claim that formulas can be worked out which will avoid this difficulty without detracting in the least from the eating quality of the candy.

In reply to the objection that with belt packing girls did not have time to inspect properly the candies that they were packing, another plant manager said: "We have overcome this difficulty by exercising greater care in manufacturing and also by closer inspection of goods before they are sent to the packing room." In other words, only perfect pieces are put on the belts.

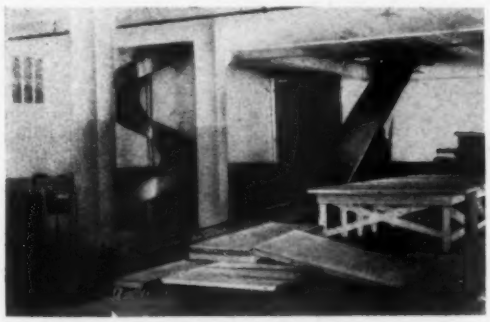
From the packing room boxes and cartons are transferred to stock rooms by belt conveyors.

Many other places could be mentioned where automatic conveying has been installed, such as in the handling of bars and package goods or in rooms given over to the manufacture of specialties. No doubt the majority of candy manufacturers have given more or less consideration to material handling methods, and yet there are very many plants where further installations could be made with advantage. Any manufacturer who desires can easily avail himself of the expert advice which makers of factory equipment will gladly give him without charge or obligation.

For the manufacturing confectioner who will approach the problem of material handling with an open mind and make use of all of the information on the subject that is available, there is a large field for development, one that is full of possibilities. The methods suggested above really represent a minimum standard for any well organized plant, as the writer has been careful not to mention any improvements which were found only in one or two factories.

Just as soon as the holiday season is over it will pay every reader to check through his plant and see where improvements can be made. Notice now while the rush is still fresh in mind which departments were congested and where the manufacturing processes were slowed up because of inadequate material handling methods. Such studies will reveal places where money can be saved, costs lowered, deliveries speeded up, the labor problem simplified and the whole manufacturing program smoothed out.

(*The forthcoming* MANUFACTURING CONFECTIONER'S BLUE BOOK OF 1924 *will contain a list of manufacturers of material handling equipment.*)



Conveyor System.
Bradley-Smith Co., New Haven, Conn.

Where Some of Our Almonds Come From

One of Southern Italy's leading industries yielded her a return of over $11,800,000 last year when thousands of tons of almonds were exported from the country. While the growing of nuts of all kinds, almonds, walnuts, chestnuts, filberts and pistachios, is an industry of prime importance, almonds are far in the lead both in point of value and quantity, says Consul General Homer M. Byington, Naples, in a report just received by the Department of Commerce. According to the International Institute of Agriculture at Rome, the total crop in 1922 was 413,160,000 pounds. Almond trees are found in nearly every section of the country, except in the mountainous regions in the north, but it is only south of the Province of Campobasso that the growing is commercially profitable in a large sense. Certain varieties, especially those growing in the immediate vicinity of Naples, are picked green and eaten as fruit. The husk is removed and the soft green shell and the kernel is eaten with salt.

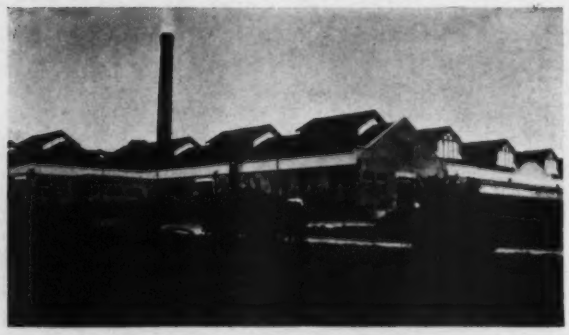
Philippines Source of New Sweetmeat

A new sweet prepared from native fruits of the Philippine Islands has just been developed in Manila, according to a report received by the Department of Commerce from its trade commissioner in the Philippines. It will be offered for sale in the United States as soon as distributing arrangements can be perfected. The flavor of many tropical perishable fruits is at present unknown to most Americans.—Science Service.

Beet Sugar Plants in Poland

There is a possibility that four additional beet sugar plants will be constructed in the near future, Consul General L. J. Keena, Warsaw, reports to the Department of Commerce. The acreage in beet sugar this year is 30 per cent greater than that of last year.

The Electric Self-Loading Lift Truck and Loaded Detachable Platforms.



"Sweetacres" Factory and Gardens.

A Journey to "Sweetacres," Australia

The Home of

James Stedman-Henderson's Sweets Ltd

Sweetacres :: Rosebery :: Sydney

Mr. James Henderson has been spending several months of this year in United States and it has been the pleasure of the editor of THE MANUFACTURING CONFECTIONER *to meet Mr. Henderson and hear the romantic story of the business development of Australia, a continent about the same area as United States but with a population of only seven million. The history of the confectionery industry of Australia is a chapter of all absorbing interest by itself—a chapter in which the evolution of the James Stedman - Henderson's Sweets institution plays a leading part.*

The following story of this modern confectionery plant—the second largest in Australasia—is made up from data gathered from a short visit with Mr. Henderson last month and also from an issue of "The Australasian Manufacturer."—EDITOR.

THE facts recorded in the following article will be of interest to our readers as indicating the large sums of money which are being invested in the confectionery trade in a country the population of which appears almost negligible when compared with that of America.

The firm of James Stedman-Henderson's Sweets, Ltd., is, as the name suggests, an amalgamation of two large concerns—viz., James Stedman, Ltd., and Henderson's Sweets, Ltd.

Quoting from *The Australasian Manufacturer:*

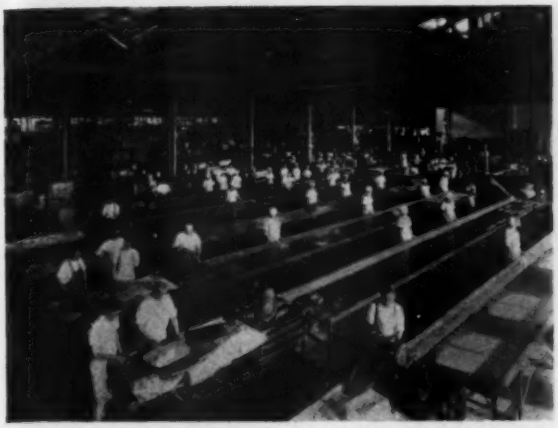
"The present business is, of course, an amalgamation—the amalgamation of two firms, James Stedman, Ltd., and Henderson's Sweets, Ltd. Both these firms had humble beginnings. The founder of the former, the late James Stedman, worked as a journeyman confectioner for a Mr. Wright, whose business he bought fifty-two years ago.

Under Mr. Stedman's management the business expanded and flourished, and it eventually became necessary to build a large factory. This structure was originally built in Kent street, but it continued to grow until it extended further along that thoroughfare, and right through to Clarence street. This structure was destroyed by fire in 1906, but another and greater factory arose in its place, to be again burned down in 1916, as the result, it is said, of incendiarism.

And now let us glance at the history of the other firm —Henderson's Sweets.

Just as the Stedman business had begun with Mr. Stedman and a boy, so the Henderson business originally consisted of Mr. James Henderson, his son, and a lad. The first leading line of this humble enterprise was "Henderson's Cough Drops," an article that grew into popularity until larger business premises became an imperative necessity. Here the far-famed "Honey Kisses" came into being and eventually commanded a large sale, compelling once more a removal to larger premises, this time nearer the center of the city of Sydney.

It was only after both enterprises had attained a commanding and secure position that an amalgamation of the two firms took place. The great fire that de-



Hard Candy Machines and Cooling Tables.

Hard Candy Packing Department.

stroyed the Stedman factory in 1916 helped to bring the two firms together. The war had given both firms their opportunity. For it blocked the imports of confectionery into Australia, and caused enormous quantities of sweetmeats to be sent to our brave defenders beyond the seas. The members of both firms seized occasion by the hand, joined forces, and erected at Rosebery, Sydney, this great confectionery plant.

Shortly after the consolidation the large factory building illustrated at top of this page was erected to meet the growing demands of their trade. Their first problem was to determine a location which would be in keeping with their scheme of reorganization and expansion. A prize was offered to the employees for the most suitable name for the site and out of many names submitted and considered the name "Sweetacres" was selected. This was combined in a special trade-mark containing the words "Sweetacres Quality Products."

It is a fitting designation, for it suggests not only sweetness but purity and freshness—the purity and freshness that cannot fail to be associated with products made under ideal hygienic conditions, in beautiful and spacious surroundings, in a factory open to the sanitary influences of an abundance of golden sunlight and pure air.

That the concern is a huge one will be gathered from the photographs showing the building and departmental interiors. The "Sweetacres" factory is located near Sydney, New South Wales, Australia, in the model suburb of Rosebery, which is within a radius of three miles from the heart of the city of Sydney.

The land occupied covers an area of 15 acres, while the building covers a little over five acres. The rest of the land is laid out with gardens with a fine avenue of Palms, football ground, cricket pitch, etc., for the company believes in promoting and encouraging the modern institutional idea in its relations with its workers. Knowing the spirit manifested by the Australian men in the world war—the men who won—we can appreciate what Mr. Henderson means when he says: "In our welfare work we avoid anything which savors of charity or patronage as we would the devil if schemes of betterment of the worker are to be of any effectual good.

The Factory Layout

The works are set out with two main floors for manufacturing purposes and equals approximately ten acres of floor space. There is also a mezzanine floor on which all raw materials are stored and from which they are gravitated to the various manufacturing departments which are directly underneath.

All raw material is ordered on requisition and is charged to the manufacturing department the minute it passes the line into the zone of the cookers. No stock lays around the department—no raw material is in sight except that which is actually in work. This material must be accounted for in the manufactured goods which are credited to the department when they pass the line out of the manufacturing department.

The whole of the building is roofed with French Marseilles tiles, of which 250,000 were required, the largest single roof in Australia. This roof, supported on posts, is divided into seven bays, each 60 feet wide, the posts being 18 feet apart, each bay having four lantern lights, thus affording complete natural light, while daylight continues, while at the same time providing ample ventilation.

Kinds of Goods Manufactured.

"Sweetacres" factory is divided into eleven departments, each specializing in different classes of confectionery and chocolate, as—

Department No. 1 is the ordinary hard goods (boiled sweets) department, which turns out a fine quality mixed assortment of hard candies.

No. 2 is the best "Boiled Sweet" department, where the satinettes and various exclusive fruit and special bon bons are made and packed in glass jars.

No. 3 is devoted entirely to halfpenny toffee lines, butterscotch, cough drops (a largely advertised specialty line) and wrapped boiled lines.

No. 4 is the caramel department, where about thirty varieties of caramels from 6 for 1d to the sumptuous real dairy cream caramels are manufactured.

No. 5 is the jube, gum and jelly department.

No. 6 is the lozenge, French paste and licorice department.

No. 7 is the department for weight chocolates, carrying a large battery of enrobers and mixing, grinding and milling machines and the standard of goods manufactured here is on a par with the finest chocolate creams in the world.

No. 8 is the novelty solid chocolate department. Here motor cars are turned out even faster than by the great Detroit flivver factory itself and being made of chocolate are perhaps more popular and more rapidly "consumed" in even a truer sense than the products of the great Henry Ford. A large variety of molded novelties keeps this department running to capacity the year around.

No. 9 is a department for special bar center chocolate

lines, such as crunch, honeycomb, fudge, macaroon, etc.

No. 10 is the pan department. Here the supreme jelly bean of the south was created and, we are told, still holds the market. No. 10 also makes pan goods, pellets, etc., of every size, shape and flavor imaginable and contains a battery of 120 revolving pans.

No. 11, last but far from least, is the fancy department. Here hundreds of thousands of Christmas stockings, millions of lucky dips and packets and dozens of special seasonal lines, dainty and delicious, are made every year to delight the heart and palate of the Australian children of all ages.

Special departments are set apart for statistical records, costing, laboratory, designing, advertising, buying, sales and invoicing offices.

"Sweetacres" also has its own printing, carpenters, engineers and electrical workshops, provided with the most up-to-date machinery. In short, acres filled with inspired energy and devoted to the manufacture of better sweets for Australia and the Near East, which could not be more adequately and appropriately named, than by the name chosen, "Sweetacres."

Research and Laboratory Control.

Like most up-to-date concerns, this firm possesses a chemical laboratory and staff of qualified technical and analytical chemists, whose function it is to advise the management in all scientific matters connected with the manufacture of high-class confectionery.

Its first function is to advise the buying department on the quality of raw materials to be purchased and to examine them on delivery to see that the bulk goods are of equal quality to the samples on which purchases are made. This insures a correct start being made in the manufacture by the provision of nothing but high quality raw materials.

The flavors and colors particularly being rather complex in their nature and composition are the special care of the laboratory, which not only buys them, but in many instances, in the case of flavors, manufactures them itself in order to meet the special individual requirements of the business and afterwards keeps a watchful eye on their use in the department.

The chemical staff also supervises all processes and methods of manufacture generally, and is continually studying them and devising ways and means for their possible improvement. As it is the policy of the firm that no line is ever so good that it cannot be improved upon in some way or other, without departing in essential qualities from a standardized product, it will be seen that in this field alone the laboratory has a large function to perform. This may more readily be understood when it is considered that with the limited population of Australia as the main possible consumer of the product, and plenty of local competition for the available business, it is necessary to manufacture many varieties in all classes of confectionery, and quite impossible to specialize in just a few varieties, in order to keep a plant of this size in full operation all the year round.

Another important function of the laboratory is the carrying out of research work.

Ideas for new kinds of goods are considered and tried out in an experimental room adjacent to the laboratory, in close collaboration with foremen of the various departments concerned.

The laboratory represents the vanguard of the business so far as new lines or processes are concerned. The "main army" follows later and gives effect to the result of its suggestions and experiments.

Finally it may be mentioned that the laboratory assists the sales department in furnishing some telling sales points of a technical nature, which would often be overlooked by salesmen acting without this knowledge.

The qualities of appearance, smell and taste of the finished product are fairly obvious to everybody, but the more subtle and not so apparent ones of wholesomeness, freedom from adulteration, lack of danger from sweating, graining, softening, discoloration, etc., of the goods after keeping—these are all salient sales points, and can only be guaranteed by the careful application of scientific methods in every detail to manufacture and control.

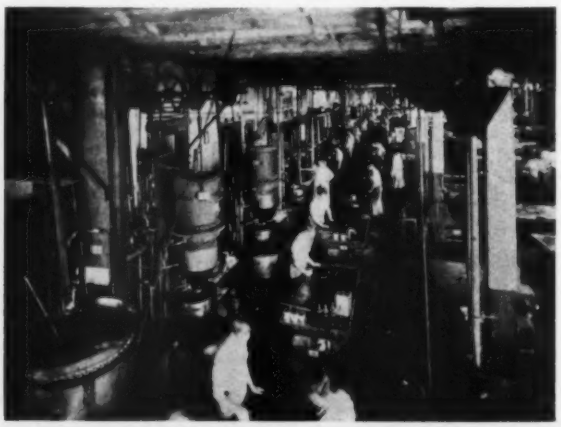
In short, the application of science to the "Sweetacres" institution is a proved success, and they figure that the chemist has only just entered upon this new field of inquiry which will have the effect of completely transforming both the methods and the article produced in the next few years.

The Soul of Sweetacres

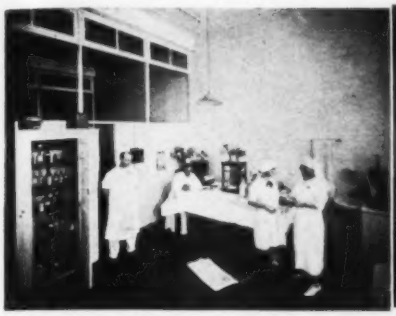
"Sweetacres" is the home of a business with a soul, most decidedly so; a devotion not only to quality and high standard of product but also to the happiness and well being of every member of the organization.

"Labor-saving devices, scientific management, increased production, and the rest are all very good," says Mr. Henderson; "but what 'if "a canna,"' as Falstaff says? What of him or her who falls by the wayside? And this is where the medical ward comes in. Is the Golden Rule merely a pious opinion or a rule of daily life? Can one do as one would be done by and still

Vacuum Cookers and Boiling Pans.

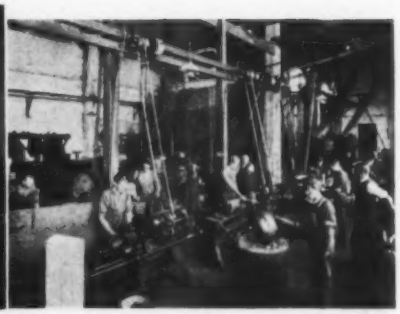


Battery of Revolving Pans.



Medical Department.

Rest Rooms.



Machine Shop and Repair Department.

make a business pay? Must one, in the 'demned horrid grind' of making quality products of *better* quality, and withal making quality pay, must one pass by on the other side like the righteous Pharisee (who no doubt contributed regularly to the Hospital Saturday Fund, and maybe subsidized a bed in the local lazar house!). Or may one pause and pour the modern equivalent of oil and wine into sufferers' sores?"

Messrs. James Stedman-Henderson's Sweets, Ltd., of "Sweetacres," say that it can be done and are showing the way to do it. They believe it pays to improve the working conditions from the health point of view and for its psychological effect on the workers who must maintain the high standards of the institution.

To put these ideas into practice a portion of the factory building was set apart as a medical ward and divided as follows:

The Medical Ward and Its Functions

A clinical room, painted white and fitted with comfortable seats, tables, cupboards, etc., and supplied with all the necessary medicines and dressings for the immediate attention of any cases of illness or accident likely to occur.

A rest room in which a tired worker or a more serious case could rest for a time, or in which the patients could receive attention. This was supplied with lounges, stretchers, blankets, hot bottles, etc., and made to look comfortable and cheerful.

An examination or consulting room in which new applicants for employment could be examined or in which a more complete examination could be made if necessary than in the clinical or dressing room.

A nurses' retiring room. A doctor (Dr. Creswell Howle) and a nurse (Sister Smart, A. T. N. A.) are engaged and their duties are outlined somewhat as follows:

When an applicant for work—or, as this firm prefers to regard it, a possible new member of the "Sweetacres" community—appears it is the doctor's business to obtain as far as possible without undue interference with the rights of the subject a complete industrial history.

The firm, quite correctly, would like to know what previous risks and hazards the applicant has run before coming into the new employment. Further, the doctor requests the applicant to allow him to make such an examination in the presence of and with the help of the nurse, as to assure himself that there is no physical or mental reason why the applicant should not be admitted.

In a plant such as this, where foodstuffs are made, it is vitally important that the workers should be as free from taint as possible, and this firm requires not health alone but cleanliness. A man or woman is not necessarily "turned down" because of some temporary defect, or some permanent defect received in some other calling, but the firm likes to know the risks undertaken. Many small ills can be recognized at such an examination and the sufferer put into the way of relief.

In fact, further than this a periodic medical examination of the worker tactfully done will often lead to the discovery of minor ills which can be prevented from growing in major ones by attention. There is no intention in all this to interfere in any way between the worker and his or her own doctor. In all cases they are referred to their own adviser for further treatment.

Fitting the Worker to His Job

An attempt is now made to fit the worker to his or her job, though naturally care has to be taken not to irritate the worker already trained. This task falls naturally upon the medical and supervising Departments jointly.

From the medical point of view, for instance, a woman otherwise well but suffering somewhat from varicose veins would not be properly employed if she was standing all day at a machine, but she might be well placed as an expert wrapper of small packages. A youth with large and sinewy hands might be of little use in the clerical department, but might be a tower of strength in the blacksmith's shop. The injuries and illnesses occurring during working hours are, of course, attended by the "staff" of the medical ward.

Such happenings are unavoidable in a big plant, but the doctor and nurse do not look upon the attention which they are able to provide as their whole work or even the greater part of it. Their main interest is to find causes, and to practice *prevention.* Their great business is to keep the people well. The question of lost time due to illness and accident crops up here. It is plain that if these matters can be fixed up "on the job" there will be less lost time than if the worker had to take a day off to visit a hospital.

All "sick passes" have to pass through the medical ward, which means that every employee who wishes to leave work on account of sickness must see the doctor or nurse before doing so, but in no case is the attendance of the ward forced upon any person wishing to seek advice outside. Following this, all who return to work are expected to report to the medical ward before taking up duty. This for several reasons—infectious cases, for example. Not only to determine whether the late sufferer is well enough to start work, but if it is safe for the rest of the community or for the consumers of the goods.

A man, again, might feel well enough to begin, but is he quite well enough to do a full day? Half an hour's rest and a teaspoonful of beef tea may make quite a difference.

Industrial Records a Valuable Key

A very important part of the work is to keep accurate records of the work done. Up till recently we kept no industrial records, no morbidity tables. No one could

Battery of Chocolate Coating Machines.

say what effect occupations had upon the worker, or in fact what particular ailment affected any section of the people at any given time except in the case of infectious diseases which were legally notifiable. The accurate keeping of records in such a plant as "Sweetacres" is of great public service, and if all firms could be induced to compile such figures they would contribute valuable information to the public health authorities. From a careful study of these and similar records will be built up a basis not only of cure but prevention.

Does it pay to have a doctor and nurse attached to a business? Does it show in the *balance sheet?* Except as a debit? Does it pay to have an efficient staff of foremen? A smart buyer? An efficient chemist? A well-trained engineer? "Sweetacres" management claim that the "instruments of production" are first of all the men and women behind the machines, and that the health of these men and women is all important to the "sweet" running of "Sweetacres."

Recent figures seem to prove that they are right.

There is another side to it.

Reducing Labor Turnover

If a careful mother knows that her daughter will be under the eye of a trained nurse all the time she is at the factory, and that there is a place where that girl can rest if she must, that she will get a home-like care while away from home—that mother will allow her child to go to work with a good deal more confidence.

Firms installing such a system can look forward to a better type of worker. "Sweetacres" has a very small "labor turnover" and many to pick from.

And lastly, as the clergy say: There is a "feel" about "Sweetacres" that is human. One feels that, though one is expected to give his best, to go one's hardest, he is working as a man among men.

That though it is a factory, it is more.

That though it is a place where one gets one's living, it is also a place where one learns how to live!

Finally perhaps we may be allowed to say with pardonable pride that THE MANUFACTURING CONFECTIONER is playing a part in disseminating the virtues and ideas of quality in relation to confectionery.

Part of the "Sweetacres" curriculum includes an individual subscription to THE MANUFACTURING CONFECTIONER by each of the twenty-four heads of departments, and each month a meeting is held with the factory superintendent, at which time they consider very carefully all the articles and advertisements contained in this magazine, and Mr. Henderson says that this procedure has proven to be very helpful in stimulating a keen interest and creative thought throughout their whole organization.

"Just as the products of this wonderful factory are sent to many lands," says *The Australasian Manufacturer*, "so the raw materials from which these products are made are drawn from almost all the ends of the earth. The cocoa beans come from Arabia, Ceylon, the Pacific Isles and South America. The cocoanut comes from Ceylon. The toys—for Christmas stockings—come largely from Japan. The ginger comes from China. The essential oils come from Italy, France and the United Kingdom. The ribbons come from France. The extracts come from Holland. The paper comes from Sweden. Many raw materials come from Great Britain. *The machinery comes mostly from the United States of America.* So that it may be said without the slightest exaggeration that almost all the nations of the world have to combine together to minister to Australia's appetite for confectionery! Could anything impress one more with the immense complexity of industry and the essentially international character of trade?

What, it may be asked, has been the secret of the success of this great company? How have two insignificant businesses become in a comparatively few years one of the greatest enterprises under the Southern Cross?

No doubt, what is called good luck played its part. Even the war, the most awful in the history of the world, had a beneficial effect on the Australian confectionery industry, just as it had a beneficial effect on many others. But after a generous allowance has been made for these indirect influences, it must be admitted that the chief cause of success of James Stedman-Henderson's Sweets, Ltd., has been the enterprise, the courage, the ability, and the business integrity of those who founded it and those who still guide its destinies.

"I could write as well as Shakespeare if I had a mind," said a poet to Charles Lamb one day. "Exactly," replied Lamb, "if you only had one." Behind great success in business, as well as behind great success in art, there must be mind—mind of a special order. There is business genius as well as other kinds of genius, and those who possess it in highest measure become the pioneers of new enterprises and the builders of new industries. In achieving their destiny they frequently accumulate much for themselves, but at the same time they materially add to the wealth, the prosperity and the progress of the nation."

QUALITY
SWEETACRES
PRODUCTS

Assimilating the Factory Foreman

Yesterday He Was the Gang Boss—Today He Is the Key Man of Industry

The Second of a Series of Twelve Articles on Foremanship

By J. K. Novins

ONE of the greatest problems in modern industry is the assimilation of the factory foreman in the scientifically organized factory plant. The modern plant is a veritable melting pot which swallows up the oldtime foreman and produces an entirely new product. Yesterday he was the "gang boss," today he is the "key man of industry."

New developments in industry give rise to new problems. The inauguration of an era of machine production called for an army of technically trained men. Colleges and universities inaugurated special departments to train such men. In the course of time these men influenced industrial development. Factory production became specialized. Factory organizations expanded. Operations were simplified. The new development called for trained workers. This gave rise to the need for vocational education in schools, and in manufacturing plants.

During the past few years a new condition has arisen. The scientific organization of the plant forces, the standardization of operators' tasks and the installation of cost systems—all these factors have created demand for a new type of foreman. *The old-type foreman must therefore be assimilated into the modern factory organization before the foreman and the organization can function properly.*

Place of the Foreman

Whereas the old foreman was merely concerned with production in his particular shop or department, even though the production was earned at the expense of inefficient management of the men under his charge, the foreman in the modern factory organization is concerned over a multitude of production factors. He stands between the management and the men. Aside from securing production he must properly interpret the management's policies to the men. He must cooperate with the management in the reduction of operating expense and in the elimination of waste. He must analyze working methods in his department in order to suggest improvements to the management. The foreman must even cooperate with the sales department by suggesting and effecting improvement in the quality of the product and help furnish estimates on costs. The labor problem in a modern factory is complex. The foreman must exercise tact and knowledge in handling his men. He is concerned over such problems as safety devices, the filling out of daily records, the training of the new worker and ways and means of getting operators to make suggestions for improvement in production.

Realizing this need a number of factory organizations several years ago began to interest their foremen in special training courses. Special study groups were formed, which the foremen were to attend on their own initiative. The foremen listened to lectures by executives in the organization and by outside speakers. The foremen were taken around to see what an intricate yet simple organization a modern manufacturing plant is.

"Indeed, during the past few years no phase of industrial training has received more attention than the development of foremen," says Henry C. Link, the well known authority on employment management. "It must be admitted that this recognition has been somewhat belated, but this is being atoned for by the energies which are being expended upon the problems of training foremen."

Foreman Training New

The training of foremen is yet in its primary stage. While most factory executives are aroused to the urgent need of foreman training, they have been slow in developing a standard technique for such training.

This phase of the work has been studied in detail by Dr. Roy W. Kelly, former Director of the Harvard University Bureau of Vocational Guidance and at present Manager of Industrial Relations for the Standard Oil Company of California. Dr. Kelly recently submitted a report on the subject to the Federal Board of Vocational Education.

"The technique and mechanical side of the foreman's training," Dr. Kelly says in his report, "has already received attention in several educational institutions and private corporations, but no fully satisfactory technique has been evolved for giving instruction in the hu-

man engineering aspects of his task. Training in these duties of the foreman must be given on a part-time basis, preferably in the plant. The work is of sufficient importance to rank with training employment managers and directors and instructors for industrial education. It should receive state and federal support and ought to be made the subject of immediate research by colleges and technical institutions."

In an illuminating report the Federal Board for Vocational Education points to some strong reasons for this new interest in foreman training.

"The present strong interest in foreman training as a means of securing more effective industrial efficiency," the report states, "is due to two very active causes. The first is, that owing to war emergencies during the past few years, the value of properly organized training and its definite results have been demonstrated on a much larger scale than ever before.

"Second, that many men concerned with the future of American industry feel that to meet anticipated active foreign competition, much more effective methods of production must be established, and that the weak links in the chain must be strengthened. Owing to these facts, many foreman-training courses are being undertaken or are contemplated in various parts of the country."

Training Foremen of the Future

It would be interesting to know just what turn foreman training will take in the near future. For one thing, it is hoped that more schools and organizations will cooperate with the factory plant to help train the factory foreman in modern management methods.

Foreman training will result in a higher type of shop executive, and in the elimination of the less desirable type—the foreman who refuses to assimilate in the modern production organization.

It is hoped that foreman training will aid the management to exercise greater care and judgment in the selection of candidates for foremanship jobs.

There is no question that a higher type of foreman will do much to aid the management in its labor problems. "A great deal of labor unrest results from corporations having failed to sell company policies through their own foremen," says Floyd W. Parsons, the well known writer on industry. "Too often," he says, "during periods of industrial strife foremen are mere onlookers, when they might be efficient leaders and molders of thought."

What have been the results of foreman-training as already carried on in a number of industrial plants?

First, the foreman begins to realize that mere "driving" of operatives does not increase production. He begins to realize that the worker has certain instincts and desires, that the worker is human, and that by appealing to these instincts and desires more can be accomplished than by resorting to brow-beating tactics. The foreman learns the delicate technique of dealing with men under stress and strain.

In a representative manufacturing plant was introduced a course of study for the foremen. The course consisted of a number of conferences, attended by the foreman and presided over by an efficient organizer. The groups met weekly. The foremen discussed various problems of utmost importance to them. The course was supervised by a federal representative. At the conclusion of the course this representative stated that more than 70 per cent of the problems which the foremen were most interested in were concerned with the handling of men.

Training for Team-Work

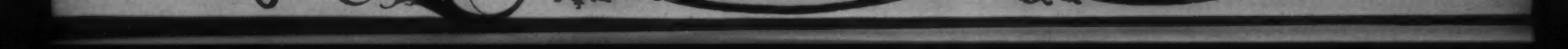
Second, special training in the plant gives the foreman a broader outlook on the manufacturing process. He is no longer obsessed with the notion that speed in production in his department even at the expense of other factors, is the most desirable thing for the management. He comes to realize that what the management wants most is intelligent cooperation of the foremen with other factory executives. In other words, the foreman is trained for team work.

Third, as a result of training the foreman begins to think of the organization as a whole; of the importance of every little process in relation to the entire organization. He is encouraged to suggest improvements in methods and policies. The foreman lends a sympathetic ear to the suggestions offered by workmen in his department. In these ways the management in the long run benefits from instruction to the foremen.

Fourth, foreman training is a sort of insurance for the future. Experience has shown that when the factory foremen are trained in their duties and are prepared for any emergency, sudden expansion in the production can be taken care of as a matter of course. The foremen will readily assimilate in the new organization.

Fifth, the factory foreman becomes a better instructor of men. Although in the highly organized plant the instruction of workmen is not the concern of the foremen, yet in daily contact with workmen he actually exercises the functions of the job instructor. This is especially true in smaller plants where the foremen are expected to break in new men, and instruct the old hands in better methods. Foreman training makes a better, and more sympathetic teacher out of the foreman—it gives him a better understanding of the teaching processes and the mental capacities of the workmen under his charge.

All these things are important to the plant management. In the long run these factors determine the quality of the product. Modern industry demands a fine, standardized product, produced at minimum possible cost. But the danger is to produce cheaply, at the expense of quality. The management must take care of this. It is the foremen's job, above all.



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To the Buyers of CANDY BOX TOPS AND WRAPS

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To manufacture High Grade Candy Box Tops it requires: The most modern facilities, the best of materials, the finest of craftsmanship, fine art, and—efficient supervision.

All these requirements are maintained in our plant, and used in connection with "THE GIN-WOL PROCESS."

"THE GIN-WOL PROCESS"

of gold stamping is a recently perfected process in producing box tops by which all the richness, permanency and selling value which is possible in the design may be brought out. In many instances a substantial saving in price may be effected also.

OUR PRICES are never higher, though "THE GIN-WOL PROCESS" is strictly a quality proposition, which appeals first to the discriminating manufacturers of high class packages where quality is the first consideration.

We are now in a position to take care of a limited number of new accounts with reputable concerns.

When the show case is jammed

Our Products

Master Metal Wraps

Mirrofoil

Silvertone Foil

U. S. Standard Composition Foil

Deko-Art Foil

U. S. Colored Foil for Fancy Chocolates

Master Metal Cartons

Master Metal Novelty Boxes

Unifoil Box Tops

Unifoil Decorative Box Wrappers

U. S. Pure Tin Foil

Our Art Service

A Staff of skilled artists is ready to work out sales-winning designs and ideas for all sorts of packages. We gladly submit sketches and offer suggestions on request.

Write for samples and information.

WHEN the show case is jammed the first candy bars to be seen and sold are the dainty, inviting pieces wrapped in genuine foil.

Appearance comes next to Quality in selling the most goods.

Does any candy manufacturer want to handicap the sales of his bars by dressing them in anything but the best foil wrappers!

The best wrappers you can buy regardless of price, we believe are *"Master Metal Foil Wrappers"*. And we sell them by guaranteed count.

Whether you are now using foil or not, you owe it to yourself to see what we have to offer. Some of the products or services listed to the left should interest you. They cover almost every package need of the Candy Manufacturer from Colored Foil for individual chocolates to elaborate Unifoil Box Covers.

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Strength of body stock combined with special processed high finish insures this result.

Figure the cost of your dipping paper when you are through with the sheet.

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Conley Creates Candy Customers!

Conley Foil around your products will stimulate sales.

First impressions count. Your package must be pleasing to the eye in order to make the *first* sale.

But the profit comes in on repeaters.

This means that underneath the outside dress there must be protected the real factory freshness and quality of your candy.

Conley Foil guarantees this.

The use of Conley plain, embossed, colored, or printed Foil, or Conley Bon Bon Cups, will make new customers for you, and increase your turnover.

Samples and prices gladly sent.

Perfect protection for perishable products

Distinctive dress for all products

Conley Foil
TRADE MARK

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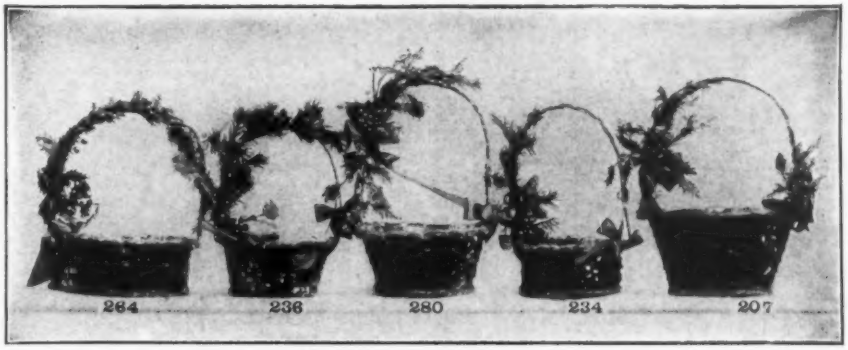
Capacity About One Pound of Candy



90c 60c 90c 80c 90c each

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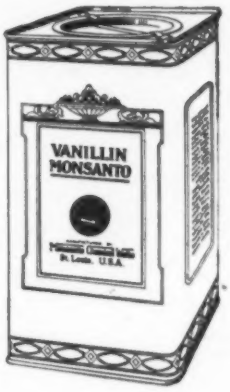

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WE take pleasure in picturing above the new container we have adopted for VANILLIN-Monsanto (The Pure White Vanillin).

Improved Security. It insures delivery to the consumer of the original unadulterated, high-quality VANILLIN-Monsanto. Its friction-top lid is firmly held in place by a metal seal, which is soldered at each end. The solder is itself lacquered. Thus any attempt to tamper with its contents is immediately apparent.

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FOR SALE—LAMBERT CLEANER AND separator, Burn's roaster, Burn's peanut butter mill, McClean blancher, Boston labeller. Address Box 188, Anna, Ill.

FOR SALE—WE HAVE COMPLETE set of machinery and tools for small manufacturer. A card will bring particulars, list and prices. Mandan Candy Factory, Mandan, N. D.

FOR SALE—5 FIVE-ROLL FINISHERS (Nat'l Equip.). 2 Cary Triple Chocolate Mills (Nat'l Equip.). 1 Bausman Disc Refiner with two kettles (Nat'l Equip.). 1 Cracker and Fanner (Nat'l Equip.). 1 Bar Cooling Machine with shaking tables, depositor and nut attachments (Nat'l Equip.). 1 Chocolate Dud Depositor for Sun Burst, complete with table (Nat'l Equip.). 33 2000-pound chocolate mixing kettles (Nat'l Equip.). 2 15-inch Enrobers, complete with feed and delivery tables and belts (Nat'l Equip.). 1 500-pound chocolate mixing kettle, complete (Nat'l Equip.). 1 Starch cleaner (Nat'l Equip.). 2 Heilman Cocoanut Ball Making machines. 4 Werner Bon Bon dipping tables—8 pots. 1 nougat mixer with tilting kettle on truneons (Nat'l Equip.) 1 100-gallon steam jacketted copper kettle. 1 60-gallon cream re-melting and mixing kettle. 2 No. 30 J. H. Day Imperial mixer. 2 No. 8 Lynn Superior day mixers. 1 No. 6 Lynn Superior mixer. 2 Haas Wrapping machines, complete. 1 Galvanized iron rectangular glucose tank 4 ft. x 3½ ft. x 1 ft. 1 Greer cooling and packing table. 1 Thomas Mills Drop Machine for 6-in. x 8-in. rolls. 1 Mills Icing Beater. 1 24-in. jacketed marshmallow beater. 2 Colton oscillators. 1 Drug mill. 1 Racine barrel mixer. 1 Kopperman nougat mixer with steam jacket. 1100 Crystal Pans. 9 Small counter scales. 8000 chocolate molds for bars and flat cakes. 1 Galvanized iron drying rack for buds. 1 Fig grinder. 1 No. 6 American Blower fan. 1 American blower. 15000 Bon Bon Dipping trays. 250 Four-wheel Dolly trucks for tray. Used Crocker Wheeler motors —D. C. 220 volt, ranging from ¼ to 35 H. P. Address V329, % The Manufacturing Confectioner.

THE MANUFACTURING CONFECTIONER'S CLEARING HOUSE

(CONTINUED)

MACHINERY FOR SALE.

FOR SALE

1 15-h.p. General Electric Motor, Direct-Current Shunt-Wound Motor, type E. C., Class 4, No. 2536, Form B, Amp. 25, Volts 500; 15-h.p. Spec. No. 8067. Speed 1200, with starting rheostat.

1 Elevator Operator Controller, bought from Moline Elevator Company, Moline, Ill.; 7½-h.p., 500 Volts, Direct-Current No. 11.

1 7½-h.p. Direct-Current, Compound-Wound Elevator Motor for single-belt machine. Made by the Northern Electric Company, Madison, Wis. Volts 500, Amp. 13, Speed 540. Made special for Moline Elevator Company.

2 Power Starch Printers, made by the National Equipment Co., Springfield, Mass. $90.00.

Chase Candy Company, 102 South 2nd St., St. Joseph, Mo.

FOR SALE—LITTLE WERNER CREAM beater, 50-pound capacity, suitable for small shop requiring 300 to 400 lbs. cream per day. Brown's Confectionery Co., 3916 Powelton Ave., Philadelphia, Pa.

FOR SALE—RACINE AUTOMATIC sucker machine. First offer of $300.00 f. o. b. Atchison takes it. The Lincoln Candy and Mfg. Co., Atchison, Kans.

WANTED TO BUY.

WANTED TO BUY—ONE TABOR strong glucose pump. Address Box 452, The Manufacturing Confectioner.

HELP WANTED.

WANTED—SECOND PAN MAN FOR large middle western concern. Steady work all year around. State wages wanted, age, experience, etc., in first letter. Address V327, % Manufacturing Confectioner.

WANTED — EXPERIENCED MAN, thoroughly competent to take full charge of chocolate dept., consisting of 5 enrobers, 20 hand dippers and about 100 chocolate wrappers and packers. Biggest end of the business, enrober dipped, 5c bars. Apply, stating experience, salary expected. Give references. Address V328, % The Manufacturing Confectioner.

HELP WANTED — A PRACTICAL candy maker to take charge of a factory which is about to supply our retail candy stores. Must be live wire in the candy making game, able to produce good candies; and willing to become financially interested (at least $2,000). A proposition of merit to competent person. Interested parties reply immediately to Cervieri & Co., Suffern, N. Y.

SALESMAN WANTED—NOW SELLING jobbers, to handle desirable, thoroughly proven, repeating candy specialty in Oklahoma. Address W334, % The Manufacturing Confectioner.

HELP WANTED.

WANTED—MARSHMALLOW MAN. Expert on all lines of marshmallow goods. Steady work and good wages to a capable man. Address W. O. Miltimore, Superintendent, Oliver-Finnie Co., Memphis, Tenn.

PAN MAN, ALL ROUND WORKING foreman, one of best and oldest companies in Chicago. Operate large pan department under most favorable conditions. Steady work. Address W330, % The Manufacturing Confectioner.

WANTED—FIRST-CLASS CHOCOLATE enrober man; one who understands tempering chocolate and can handle five enrobers. State salary wanted and furnish references. Address T323, % The Manufacturing Confectioner.

Salesman Wanted — Beginning January first, the Martin Candy Company, Marshfield, Oregon, will require the services of a thoroughly competent and experienced salesman. Married man preferred. Exceptional opportunity for some live wire desiring connection with growing concern in most talked of place in West today, COOS BAY. They want a man who will anticipate becoming financially interested, big enough in personality and ability, eventually to take charge of and manage the business.

For further particulars, address G. A. Martin, Marshfield, Oregon.

WANTED — FIRST-CLASS FOREMAN for hard goods department. Must understand his business and be able to handle help. State wages wanted and send references. Address T324, % The Manufacturing Confectioner.

WANTED—FIRST-CLASS PAN MAN. One who can handle help and take charge of department. State wages wanted and furnish references. Address T325, % The Manufacturing Confectioner.

WANTED — COMPETENT, EXPERIENCED forewoman to assume charge of packing department. Gorton Chocolate Co., Corning.

WANTED—SUPERINTENDENT WANTED for candy factory specializing in creams, hand-dipped bonbons, jellies and gums, also make hard candy, caramels, kisses, fudges, lozenges, machine and hand dipped chocolates. G. J. Hamilton & Sons, Pictou, N. S.

CANDY MAKER—TO TAKE CHARGE of chocolate cream center department. Address W340, % The Manufacturing Confectioner.

HELP WANTED — PRACTICAL MAN for roasting and moulding department. Beacon Chocolate Co., North Tonawanda, N. Y.

HELP WANTED.

WANTED — HIGH-CLASS PRACTICAL man for making creamy centers, caramels, nougats and fancy centers for high-grade package line. No floaters wanted. Prefer man that has had experience with large eastern factories. Excellent position for right man. State full particulars first letter. Address W332, % The Manufacturing Confectioner.

WANTED—BY LARGE MIDDLE WESTern factory, a working foreman for cream center department, who is capable of making quality goods in large quantities and competent to handle help. Do not apply unless you have wide experience. State wages wanted, age, experience and references in first letter. Address W339, % The Manufacturing Confectioner.

WANTED—A FIRST-CLASS WORKING foreman for hard goods department by one of the large manufacturers in the middle west. Address T320, % The Manufacturing Confectioner.

WANTED — FORELADY FOR CHOCOlate department. One who is capable of handling help, teach dipping and supervise packing fancy packages. State salary and furnish references. Address T322, % The Manufacturing Confectioner.

WANTED—AN ESTABLISHED MANUfacturing and jobbing confectioner desires an experienced salesman for the retail trade for Illinois territory. Place to be vacant the first of the year. Married man about thirty years of age, high charactered, good habits, pleasing personality and a real worker desired. Have exclusive sale on nationally advertised package line, high-grade hard goods and bulk chocolates. Big line of bar goods, penny goods and pail specialties. Our own make of hard goods, chocolates and specialties. Complete line of fountain goods. Drawing account and bonus, good opening for the right party. Address W331, % The Manufacturing Confectioner.

POSITIONS WANTED.

WANTED—IF YOU ARE DESIROUS OF making a change in your organization for the coming year, and looking for a practical man of wide experience to take charge of the manufacturing end, then I would like to get in touch with you. I would prefer to locate with a live firm who require quality merchandise on a large scale, one making a general line of package goods or catering to home-made style; wholesale or large retail. Address W333, % The Manufacturing Confectioner.

WANTED—BY AMBITIOUS SALESMAN traveling Michigan and Illinois, including Chicago, carrying three five-cent bars manufactured by Chicago concern, a line of penny specialties. Manufacturer can be assured of conscientious intensive work all the year round. Will call on trade every four weeks. Van Engers, Inc., 1945 Sheffield Ave., Chicago.

THE MANUFACTURING CONFECTIONER'S CLEARING HOUSE

(CONTINUED)

POSITION WANTED.

POSITION WANTED—GENERAL MANAGER desirous of making connection with candy and chocolate company making complete line bulk candies and chocolate, with 30 years of practical experience in every branch of the candy and chocolate industry, coupled with a thorough business training, having lately been connected as general manager with one of the largest and most successful houses in America with a national reputation of developing large capacities at low production cost through the systemizing all operations and the thorough and practical layout of all departments in manners of operation. Can develop high-class organization and instal a practical and highly efficient production and cost program. Can furnish first-class references. Personal interviews invited. Please address F22, % The Manufacturing Confectioner.

SOUTHERN CALIFORNIA FACTORY owners, kindly take notice. A superintendent of one of the largest chocolate houses producing bulk and package goods wishes to locate in southern California.

This is your opportunity to obtain the services of a man of proven ability, capable in every respect.

QUALIFICATIONS:

1. Can make anything out of candy.
2. A student of our best production engineers.
3. Expert on gums and hard candy.
4. Can produce Jordan almonds at a lower labor cost than any house.

If you have no factory, let me build one for you.

Address Supt., B210, % The Manufacturing Confectioner.

POSITION WANTED.

POSITION WANTED—SUPERINTENDENT, Jan. 1st, with experience in the manufacture of a general line of quality goods, getting production at a minimum cost. I can give the best of references. Would especially be interested in a proposition that I could obtain an interest in. Address W337, % The Manufacturing Confectioner.

WANTED—POSITION AS FOREMAN of shipping department with company doing extensive shipping, exceptional opportunity to employ man thoroughly qualified to handle your shipping and transportation affairs with minimum cost and maximum efficiency, six years' experience confectionery. Address W336, % The Manufacturing Confectioner.

FOR SALE—MISCELLANEOUS.

FOR SALE AND RENT — FLOOR space, 100x50, to let; completely equipped for manufacture of high-class gum goods, including two large drying rooms; Mogul, steam jacketed copper kettles, 10 to 250 gallons (stirring and open); starch, starchboards, steaming trays and all other utensils pertaining to manufacturing (capacity 15,000 pounds weekly). Will make an interesting proposition on easy terms to right party for purchase of entire equipment and rent of space. E. C. Rich, Inc., 29 9th Ave., New York City, N. Y.

FOR SALE—ABOUT 100 LBS. 6x15¼ rubber bon bon mats. Also 5 gals. shellac. Submit your offer. Bergman-O'Rear Co., Lafayette, Ind.

FOR SALE.

FOR SALE—LARGE CANDY WAGON, equipped with lock doors, sides and rear, properly insulated to withstand heat and cold, mounted on ton trucks, all in A-No. 1 condition. Too large for my use. Inquire Racine Candy Shop, 16th and Junction, Racine, Wis.

FOR SALE—BUSINESS OPPORTUNITIES. Manufacturer has retail store for sale or rent at busy corner in West Philadelphia. Address W-335, % the Manufacturing Confectioner.

MACHINERY WANTED.

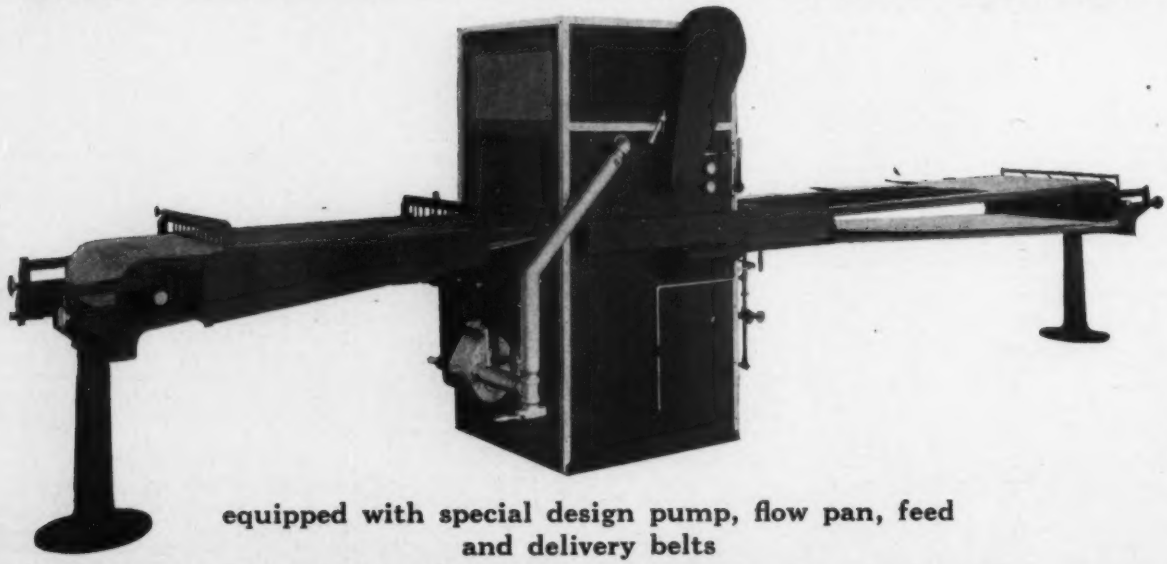
WANTED—500-LB CHOCOLATE MELTING kettle, marshmallow beater, hand printer and 50- or 60-gallon mixing kettle. Must be in good condition. Allen & Andrews, Corning, N. Y.

WANTED—STANDARD ENROBER IN A1 shape. Will pay spot cash, and must be guaranteed. Also No. 3 Racine starch buck. Merrill Candy Co., Merrill, Wis.

FOR SALE—1 Savage after-dinner mint machine with fifty ft. conveyor; 1 Hohberg Waffle and Pillow hard candy machine, with two sets of chains and fifty ft. conveyor; 1 80-gallon iron kettle peanut salter with steam coils, including two baskets; 1 20-inch power sizer; 2 Herald furnaces, complete with blower; 1 Racine marshmallow barrel heater; 1 six-ton Brunswick ice machine, complete with condensor and coils. Above machinery is in good working order. Will sacrifice for immediate cash sale. The Max Glick Company, Cleveland, Ohio.

WANTED — SECOND-HAND CHOCOlate cooler, 20 drawer capacity. Must be in elegant condition. Chas. A. Kiehl, Williamsport, Pa.

The New UNIVERSAL CHOCOLATE COATING MACHINE



equipped with special design pump, flow pan, feed and delivery belts

Before placing your order investigate the merits of this machine. It will pay you.

UNIVERSAL CANDY and CHOCOLATE MACHINERY CO.

4 FISK AVE., SPRINGFIELD, MASS.

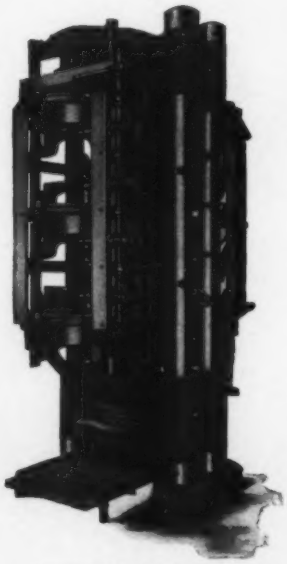
Cocoa Butter Production

Pressing Cocoa Butter?

Carver Equipment will press extremely dry.

Pressing for Cocoa?

Carver Equipment will press maximum tonnage in minimum time.



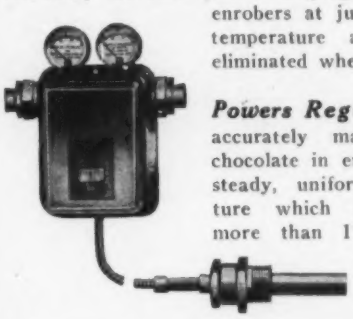
Patented and Patents Pending

Glad to send Catalog

FRED S. CARVER
ENGINEER
8 West 40th Street
New York

Your Troubles Are Over

Chocolate coatings turned gray—too thick—and the worry and time spent in keeping chocolate in enrobers at just the right temperature are entirely eliminated when you use a



Powers Regulator. It accurately maintains the chocolate in enrobers at a steady, uniform temperature which never rises more than 1° above or below the temperature desired.

It Saves Labor. It saves the operator's time for more important work than adjusting steam and cold water valves to get chocolate at the proper temperature. It is more accurate and obedient than a human helper.

It Stops this Waste of Chocolate. When chocolate in enrobers gets too cold the coatings get too thick. A Powers Regulator eliminates this waste of chocolate. You get coatings of uniform thickness.

You Get Coatings of An Excellent Glossy Finish. No more coatings off-color because the temperature of the chocolate gets too hot, and no more delays and waste of chocolate and enrober man's time in running gray goods over again.

This Regulator Makes Good or We Receive No Pay! It costs you nothing to find out what EXTRA PROFITS you can get from your enrobers with this regulator. The coupon below will bring particulars of our 30-Day FREE Trial Offer and prices. May we send them?

THE POWERS REGULATOR CO.
Specialists in Automatic Heat Control
2796 Greenview Ave., CHICAGO

NEW YORK **BOSTON** **TORONTO**

31 other offices. Your Telephone Directory will tell you if one is in your city.

(2616)

The Powers Regulator Company,
2796 Greenview Avenue, Chicago.

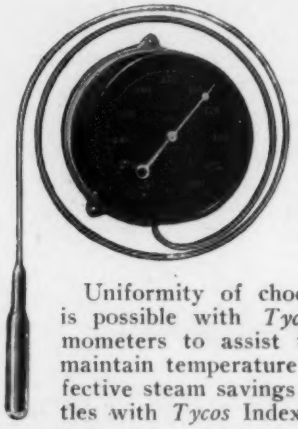
Let me have, without obligation, particulars of your 30-Day Free Trial Offer and the prices of your regulator for chocolate enrobers.

Name .....

Firm .....

Address .....

Tycos Temperature Instruments
INDICATING - RECORDING - CONTROLLING

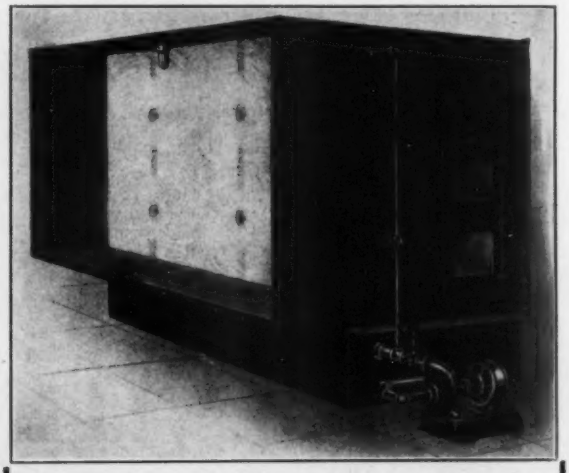


Tycos Index Thermometer for Chocolate Enrobers and Melting Kettles.

Uniformity of chocolate coverings is possible with *Tycos* Index Thermometers to assist the operator to maintain temperature standards. Effective steam savings on melting kettles with *Tycos* Index Thermometers.

Request Confectioners Catalog Part 900.

Taylor Instrument Companies
Rochester, N. Y., U. S. A.
Canadian Plant: *Tycos* Bldg., 110 Church St., Toronto
There's a *Tycos* or *Taylor* Temperature Instrument for every purpose.
No. 944

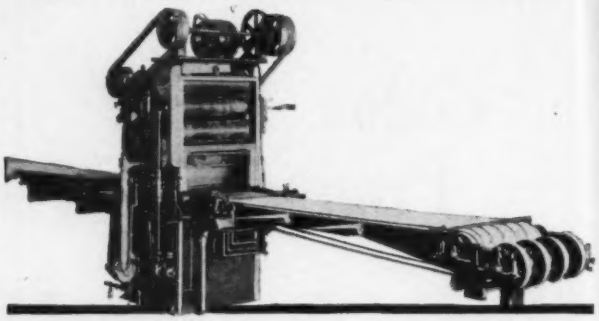


Lynn Dehumidifier, showing Revolving Spray Nozzle System for Air Conditioning in Candy Manufacturing Plants.

Successful Candy Manufacture

Fine Confectionery, Perfect Candy, Glossy Chocolates which retain their flavor, texture and keeping quality, meeting the specifications of the most particular and exacting buyers, are dependent upon uniform temperature and humidity conditions in your dipping and packing, and cooling rooms.

Bids submitted on receipt of plans and specifications
Manufactured and Installed by
HELMER AIR CONDITIONING CORP.
SUCCESSORS TO
LYNN AIR CONDITIONING COMPANY, INC.
103 PARK AVENUE NEW YORK, N. Y.
CHICAGO, MONADNOCK BLDG.
For a more detailed description of the Lynn System see Oct. issue of this Journal page 33.



Have your coating belts made to order

Many large candy manufacturers in all parts of the country are receiving better service and saving money by using Gilmer Endless Coating Belts.

Gilmer Belts are solid woven to full uniform thickness. They are straight and smooth running. They have no "saw edges."

Gilmer Coating Belts are woven from the finest long fiber white cotton. They are far longer wearing and therefore economical. These belts come wrapped in sanitary wax envelopes which not only keep the belts clean, but which prevent mildew and allow you to "carry a spare."

We will gladly make you up belts for any or all of your machines. Make them the exact length and weave them from the fiber best suited to your needs. Write us today for prices and complete information.

L. H. GILMER CO.
Confectioner's Equipment Division
PHILADELPHIA

"It's a Gilmer product—you can depend on it." — Happy Van, the Gilmer Man.

Gilmer

Thomas Mills & Bro., Inc.

1301 to 1315 North Eighth St. Philadelphia, Pa.

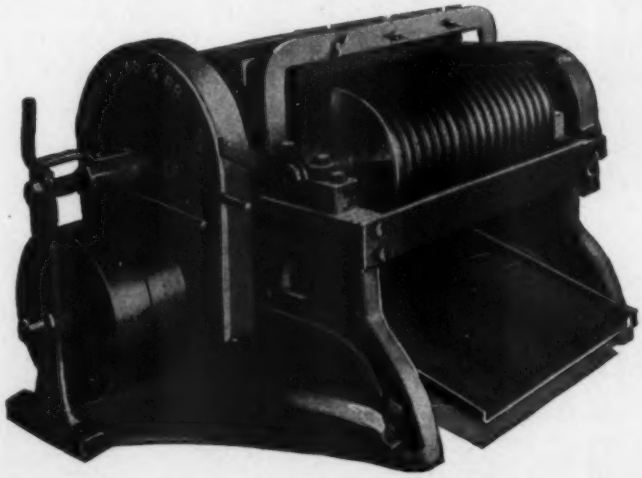
AUTOMATIC SEAMLESS HARD CANDY MACHINE

Send for pamphlet on this machine.

Have You Our Latest Catalogue on Entire Line of Candy Factory Equipment?

If not, same will be sent on advices as to just what machinery is required.

No. 10 BALL MACHINE for COCOANUT, CREAM and CHICLE



HEADQUARTERS
FOR CANDY
MACHINERY,
TOOLS AND
EQUIPMENT
SINCE 1864

"If it's listed with Mills it's a success"

National Equipment
Chocolate Machinery

The Bausman Disc Process
for Grinding Chocolate

unquestionably is the most advanced in producing chocolate liquor of the finest grade.

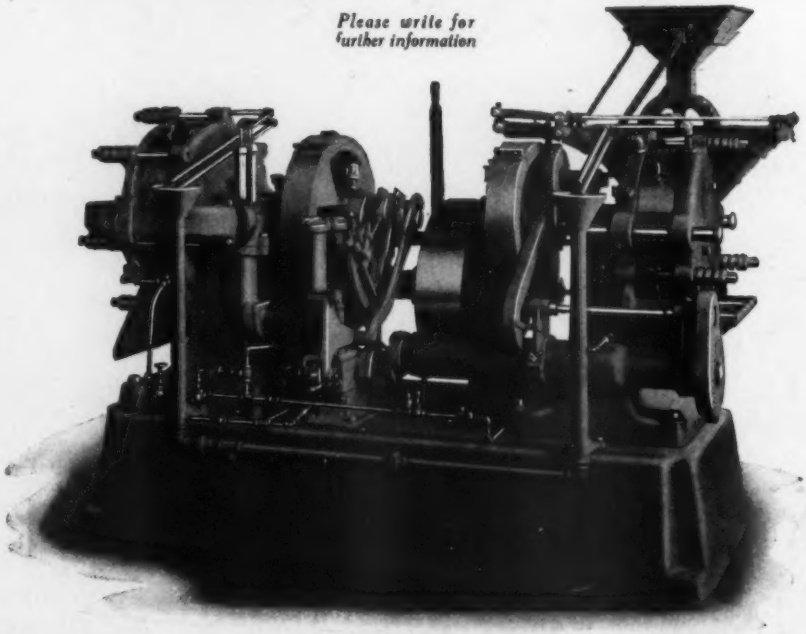
Produces from 300 to 500 lbs. per hour or about twice the output of one Triple Mill.

The grinding plate surfaces—or discs—may be changed (when necessary) in 2 hours' time by any handy-man, against from 2 to 5 days' shut down and services of an expensive expert—to sharpen the stones of the Triple Mill.

Automatic feed, continuous operation, extra large water jackets and steam connections to maintain the desired temperature and built to the internationally known *NATIONAL EQUIPMENT* high standard of materials and workmanship.

An immediate delivery is assured.

Please write for further information



National Equipment Company

Largest Manufacturer in the World of Candy and Chocolate Machinery

Springfield, Mass., U. S. A.

Index of Contents, January-December, 1923

The following is a summary of the articles which have appeared in Volume III of this publication:

MANAGEMENT

Superintendent's Roundtable 1
- **Quality Not Incompatible with Quantity Production.**—Dale G. Steely.
- **Cleanliness and Its Relation to Labor Turnover.**—Frank M. Christ.
- **Let's Know Our Costs.**—H. J. Stoltz.
- **Used Machinery.** By A Superintendent.
- **An Appeal for Better Machinery.**—Clifford Clay.
- **Some Random Thoughts for Superintendents and Managers.**—A. G. Dean.
- **A Cost System That Proved Practical for a Small Factory.**—J. B. Paist.
- **Behind the Factory Door.**—The Superintendents' Ideas.

Dos and Don'ts for Candy Superintendents.—Dr. A. P. Bryant ..... Jan.
Foremanship.—Ralph G. Wells, (Candy Factory Management Methods) ..... Jan.
I—The Factory Foreman of Today.—J. K. Novins .... Oct.
Labor and Employment Methods.—Ralph G. Wells ... Nov.
Training Help in Candy Plants.—Ralph G. Wells ..... Nov.
Stabilization of Factory Working Force.—Mabel E. Wallace ..... Nov.
Material Handling Methods and Equipment.—Ralph G. Wells ..... Dec.
Assimilating the Factory Foreman ..... Dec.
Manufacturing Problems and Control Methods.—Ralph G. Wells ..... Feb.
Co-ordinating Sales and Production.—Ralph G. Wells ..... March
Planning and Maintaining Production Standards and Schedules.—Ralph G. Wells; Part I, Apr., Part II .. May
Waste.—Ralph G. Wells ..... June
Job Study and Selection of Methods.—Ralph G. Wells .. July
Warm Weather Problems.—Ralph G. Wells ..... July
Building an Effective Working Force.—Ralph G. Wells ..... Aug.
Material Control Systems.—Ralph G. Wells ..... Sept.
Organization and Personnel Problems.—Ralph G. Wells ..... Oct.

PURCHASING

Customs of the Raw Material Trades and Their Relation to the Candy Industry.—A. Adams Lund ..... Sept.-Dec.
Relation Between Purchasing and Production Departments.—By a Production Man ..... Sept.
Forms and Routine for Material Control Systems.—By a Purchasing Agent ..... Sept.
Foreign and Domestic Package Weights.—A. Adams Lund ..... Oct.
Weighing.—A. Adams Lund ..... Nov.
Tare—Its Evolution and Application to Raw Materials. A. Adams Lund ..... Dec.

TECHNICAL

III. Standards of Cacao Products and Forms of Adulteration.—Robert Schwarz & M. A. Posen ..... Jan.
Confectioner's Colors—Their Uses and Abuses.—Stroud Jordan, Ph. D. ..... Jan.
Chocolate and Cocoa Products—Their Uses and Applications.—Robert Schwarz & M. A. Posen ..... Feb.
Standardization of Confectioner's Colors.—Stroud Jordan, Ph. D. ..... Feb.
Building New Types of Confections.—Dr. Frederic W. Murphy ..... Feb.-Mar.
Laboratory Control of Chocolate and Cocoa Products.—Robert Schwarz & M. A. Posen ..... Mar.
Confectioner's Thermometers—Why, When and How to Use Them.—Dr. Stroud Jordan ..... Apr.
Use of the Laboratory in Caring for Raw Materials.—A. Adams Lund ..... Apr.-May
Edible Gelatin in the Confectionery Industry.—Thomas B. Downey, Ph. D. ..... Apr.
Standardizing and Checking Percentages of Chocolate Coating.—William S. Cloud ..... Apr.
Homogenizing and Its Application to Candy Making.—P. M. Travis, B. Sc. ..... May
Oil Versus Coal for Power Plant.—W. F. Schaphorst, M. E. ..... Aug.
The History, Manufacture and Merits of Molasses.—Chas. C. Brown ..... Sept.
Developments in American Manufacture of Edible Gelatine and Its Place in the Human Diet.—L. M. Tolman ..... Sept.
How Much Does a Clean Boiler Save?—W. F. Schaphorst, M. E. ..... Nov.

SALES PROMOTION

Co-operative Advertising Campaign for the Candy Industry.—V. L. Price ..... Jan.
Economic Problems of Our Industry.—V. L. Price .... Feb.
Candy Merchandising for All Seasons.—A. F. Walz .. Feb.
Co-ordinating Sales and Production ..... Mar.
Mother's Day, Another Big Candy Season.—V. L. Price ..... Mar.
Vogan's Help Dealers Make More Money.—W. W. Brown ..... Mar.
The Chemistry of Salesmanship.—Sidney J. Rockwell .. Mar.
Salesmen—Commercial Shock Troops.—John H. Allen . Mar.
Candy Display Methods.—Carl E. Behr ..... Mar.
Candy Salesmen and Salesmanship.—Albert F. L. Schmidt ..... Mar.
The Golden Rule.—Herman W. Hoops ..... May
Making the Candy Business Better.—V. L. Price ..... June
Modern Sales Research.—J. George Frederick ..... June
Your Catalogue—An Expense or an Investment?—Harry Bottsford ..... July
A Survey of Retail Distribution.—Irving S. Paull ..... Aug.
How to Use the Department of Commerce in Building Foreign Business.—Julius Klein ..... Oct.
Getting Jobber Co-operation.—J. George Frederick ... Nov.
Helping the Retailer Sell Confectionery.—J. George Frederick ..... Dec.

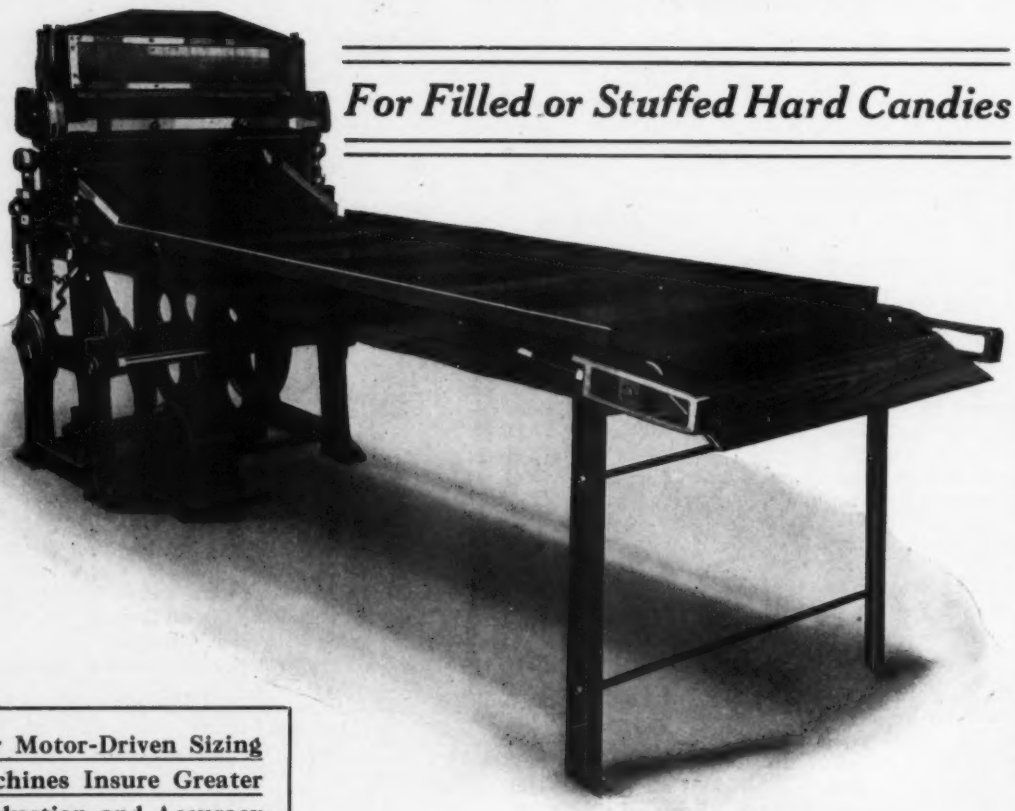
MISCELLANEOUS

World Economic Situation for 1923.—Herbert Hoover .. Jan.
Why the Candy Superintendent Needs Scientific Knowledge.—Frederic P. Siebel, Ph. G. ..... Jan.
From Newsboy to Millionaire—A Romance of Industry. MacRobertson's, Australia ..... Jan.
A Message from the Manufacturing Confectioners of England.—Sydney W. Pascall ..... June
Business Fundamentals Affecting the Confectionery Trade and the Business Outlook.—Frederick L. Hoffman, LL. D. ..... June
The Cowan Co., Toronto, Canada.—Craig Saxon ..... July
Influences That Prejudice the Public Against Confectionery.—Frank Hilton ..... Aug.
A Journey to "Sweetacres," Australia ..... Dec

(We have 10 complete bound volumes of 1923 issues—$5.50 while they last)

SIMPLEX Improved Motor Driven Plastic Press

For Filled or Stuffed Hard Candies



Our Motor-Driven Sizing Machines Insure Greater Production and Accuracy

The Simplex Improved Plastic Press

has a greater output capacity than the older type machines; *24 inch Die Bars;* direct motor drive, two speeds, special wire screen conveyor. Operation economical, simple and exceptionally accurate—every machine given a practical test before shipment.

An assortment of popular dies included with every press. No extra charge.

VACUUM CANDY MACHINERY COMPANY

326 W. Madison Street **CHICAGO**

Index of Advertisers, January-December, 1923

This index will be of service to our many subscribers who keep complete file of copies for reference. We have a few complete bound volumes at $5.50 for 12 issues of 1923.

The confectionery supply and equipment firms who have been with us every issue of the year are so indicated: Jan.-Dec. The figures following firm names indicate the months and issues in which their advertisements appeared during the year 1923.

CONFECTIONER'S MACHINERY AND FACTORY EQUIPMENT

	Month of Issue.
Baker Ice Machine Co., Inc.	1-2-3
American Machine & Foundry Co.	1-2-5
The Ball Cream Beater Co.	1-2
Bentz Engineering Corp.	1-2-3-4-5-6-7-8-9
Emil J. Brach	1-5
The Bucyrus Copper Kettle Works Co.	1-2-3-4-5
B. H. Bunn Co.	1
Candy & Choc. Equipment Co	1-2-3-4-5
Carver, Fred S.	Jan.-Dec.
J. P. Devine Co.	1-2
Eppelsheimer & Co.	Jan. Dec.
Ferguson & Haas, Inc.	1-3-5-7-9-10-11
W. L. Fleisher & Co.	1-2-3-4-5-6-7-8-9-10
L. H. Gilmer Co.	7-8-9-10-11
J. W. Greer Co.	1-2-3-4-5-6-7
Helmer Air Conditioning Corp.	10-11-12
Improved Appliance Co.	1
Thos. Mills & Bro., Inc.	Jan.-Dec.
Morgan Machine Co.	1
Mueser Company	5
National Equipment Co.	Jan.-Dec.
Package Machinery Co.	1
The Powers Regulator Co.	8-9-10-11-12
Racine Confectioners' Machinery Co.	1
Rex Sales Company	11
Savage Bros. Co.	5-6-7-8-9-10-11
B. F. Sturtevant Co.	1-2-3-4-5-6-7-8-9-10
Taylor Instrument Co.	10-11-12
Universal Candy & Chocolate Mach. Co.	10-11-12
Vacuum Candy Machinery Co.	3-4-5-6-7-8-9-10-11-12

CONFECTIONERS' RAW MATERIALS

American Maize Products Co.	Jan.-Dec.
Anheuser-Busch	10-11-12
American Sugar Refining Co.	1-2-3
Best Foods, Inc.	Jan.-Dec.
Clinton Corn Syrup Refining Co.	1-2-3-4-5-6
Crescent Mfg. Co.	1-3-5-7-9-11
The Dry Milk Co.	1-2-3-4
T. M. Duche & Sons	Jan.-Dec.
The Franklin Sugar Refining Co.	1-2-3-4-5-6-7-8
Haug & Company	Jan.-Dec.
L. S. Haehnlen	Jan.-Dec.
Ideal Cocoa & Choc. Co.	Jan.-Dec.
H. Kohnstamm & Co., Inc.	Jan.-Dec.
Merrell-Soule Co.	3-4-5-6-7-8-9-10-11-12
Nat'l Aniline & Chem. Co., Inc.	5-6-7-8-9-10-11-12
Nulomoline Company	Jan.-Dec.
Seneff-Herr Co.	Jan.-Dec.
A. E. Staley Mfg. Co.	9-10-11-12
Spencer Importing Co	1-2-3-4-5-6-7
Stein, Hall & Co., Inc.	Jan.-Dec.
Thurston & Braidich	Jan.-Dec.
Wamesit Chemical Co.	1-2-3-4-5-6
O. J. Weeks Co., Inc.	1
White-Stokes Co., Inc.	Jan.-Dec.
Antoine Chiris Co.	10-11-12
Foote & Jenks	Jan.-Dec.
Alex Fries & Bro.	Jan.-Dec.
Fritsche Bros.	Jan.-Dec.
Monsanto Chemical Works	Jan.-Dec.
Henry H. Ottens Mfg. Co	1
Ungerer & Co.	Jan.-Dec.

FLAVORS

W. J. Bush & Co.	Jan.-Dec.
Corrizo Extract Co.	Jan.-Dec.

CHOCOLATE

Walter Baker & Co., Ltd.	Jan.-Dec.
Fortune Products Co.	Jan.-Dec.
Peter Cailler Kohler Swiss Chocolates Co.	Jan.-Dec.
Rice Chocolate Co.	4-6-8-10
Runkel Brothers, Inc.	1-2-3
The Stollwerck Chocolate Co.	1-2-3-4-5-6
Warfield Chocolate Co.	1

GELATINE

Atlantic Gelatine Co.	Jan.-Dec.
Crystal Gelatine Co.	Jan.-Dec.
Thos. W. Dunn Co.	Jan.-Dec.
Essex Gelatine Co.	Jan.-Dec.
Milligan & Higgins Gelatine Co.	Jan.-Dec.
Harold A. Sinclair	Jan.-Dec.
Swift & Co.	2-4-6-8-9-10-11-12
United Chemical & Organic Pro. Co.	Jan.-Dec.
U. S. Gelatine Co.	Jan.-Dec.
J. O. Whitten Co.	Jan.-Dec.

PACKING MATERIALS

American Lace Paper Co.	Jan.-Dec.
The Conley Foil Co.	Jan.-Dec.
Dupont Cellophane Co., Inc.	Sept.
Edgerton Mfg. Co.	7-8-9-10-12
Franz Euler & Co.	1-2-3
H. Gamse & Bro.	9
John Horn	7
Hampden Glazed Paper & Card Co.	1-3-8-10
McLaurin-Jones Co.	10-11
Johnson-Cowdin-Emmerich	1-5
J. M. Kaupp & Son	2-3
Nashua Gummed & Coated Paper Co.	6-7-10
Karl Pauli Corp.	1-2-3-8-9-10-11-12
Knickerbocker Case Co.	2-3-4-5-6-7
Milwaukee Label & Seal Co.	1-3-5-7-9-11
National Can Co.	1-5
Rapid Cutting Co.	2-3-4
H. Schultz & Co.	7-9-11
Nat'l Ass'n of Box Manufacturers	Jan.-Dec.
United States Foil Co.	12
U. S. Printing & Lithograph Co.	1-2-3
Upressit Products Corp.	1-2-3-4-5-6-7
F. J. Schleicher Paper Box Co.	1
The F. C. Traver Paper Co.	1
White & Campbell	1-3-5-6-10-11

MISCELLANEOUS SUPPLIES AND SERVICES

The Crystal Novelty Co.	5-6
Spangler Mfg. Co.	2
The Nathan M. Stone Co.	1
Stevenson Refrigeration & Storage Co.	4-5
True-Worth-Garment Co.	1-2-3
Marcone & Company	Jan.-Dec.
Emil Pick	Feb.-Dec.
Von Dannenberg & Co.	Jan.-Dec.
Schwarz Laboratories	Jan.-Dec.

The Allured Manufacturer's Mediums Which Blanket the Manufacturing Branch of Confectionery Industry

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The first and only publishing company in the world whose publications are directed exclusively to the manufacturing branch of the confectionery industry.

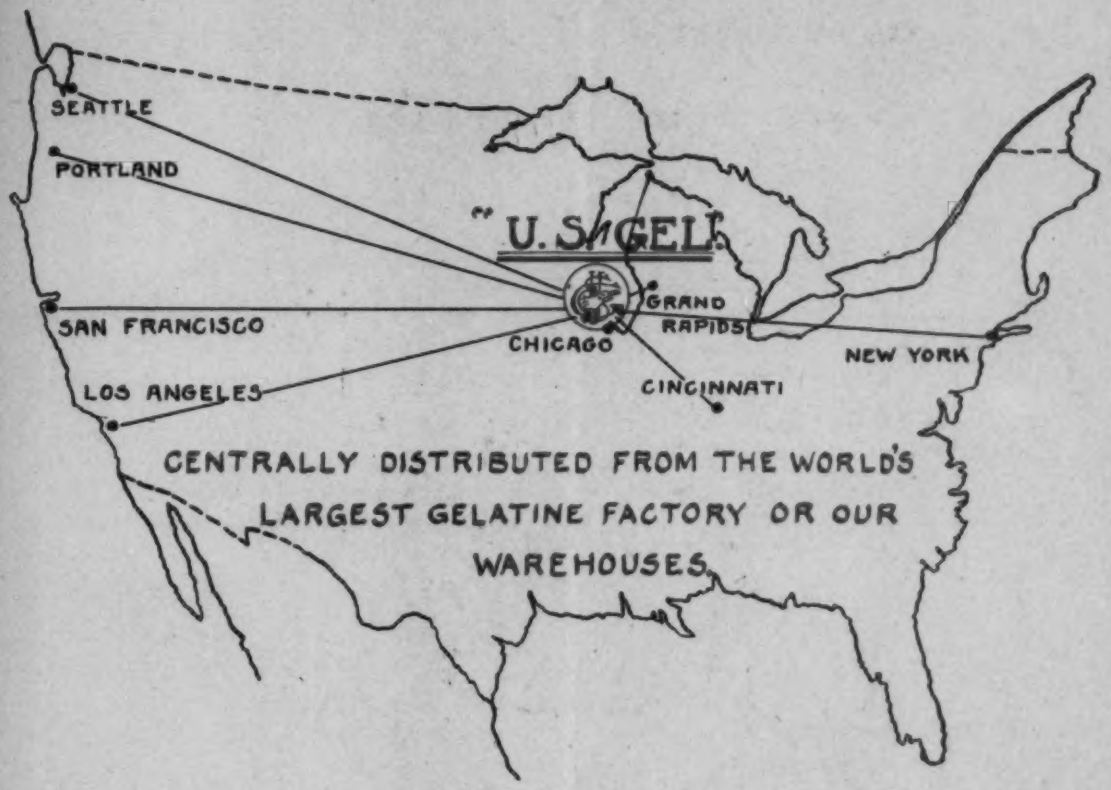
ADVERTISERS INDEX

	Page
Acme Box Co	55
American Lace Paper Company	45
American Maize Products Company	51
Anheuser-Busch, Inc.	48
Antoine Chiris Co	9
Atlantic Gelatine Company	8
Baker & Company, Ltd., Walter	48
Best Foods, Inc., The	10
Bush & Company, Inc., W. J	11
Carver, Fred S	59
Conley Foil Co	44
Corn Products Refining Co	48
Corrizo Extract Co	52
Crystal Gelatine Company	47
Duche & Sons, T. M	54
Dunn Co., Thos. W	51
Edgerton Mfg. Co	Back Cover
Essex Gelatine Company	53
Eppelsheimer & Company	55
Ferguson & Haas, Inc	38
Foote & Jenks	50
Fortune Products Company	52
Fries & Bro., Alex	53
Fritzsche Bros., Inc	6
Gilmer Co., L. H	60
Haehnlen, L. S	52
Haug & Co	52
Helmer Air Conditioning Corp	60
Ideal Cocoa & Chocolate Co	47
Karl Pauli Corporation	45
Kohnstamm & Co., Inc., H	16
Marcone & Company	51
McLaurin-Jones Co.	44
Merrell-Soule Company	53
Mills & Brother, Inc., Thos	61
Monsanto Chemical Company	49
National Association Box Mfrs	15
National Aniline & Chemical Co	50
National Equipment Company	62
Nulomoline Company, The	Insert 10-A
Peter Callier Kohler Swiss Chocolate Co	46
Pick, Emil	55
Powers Regulator Company	59
Rice Chocolate	55
Seneff-Herr Co.	7
Sinclair, Harold	Second Cover
A. E. Staley Mfg. Co	46
Stein-Hall & Co., Inc	49
Swift & Company	46
Taylor Instrument Co	60
Thurston & Braidich	54
Ungerer & Company	4
United States Foil Co	43
United Chemical & Organic Company, The	12-13
United States Gelatin Company	Third Cover
Universal Candy and Chocolate Machine Co	58
Von Danneberg & Company	54
Vacuum Candy Machinery Company	64
White-Stokes Company, Inc	14
Whitten Company, J. O	50

1923

nch

Page
. 16
. 51
. 44
. 53
. 61
. 49
. 15
. 50
. 62
0-A
. 46
. 55
. 59
. 55
. 7
over
. 46
. 49
. 46
. 60
. 54
. 4
. 43
2-13
over
. 58
. 54
. 64
. 14
. 50



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